Clinical Lecture
ON
SPASTIC PARAPLEGIA FROM MYELITIS.

Delivered at the National Hospital for the Paralysed and Epileptic on February 3rd, 1881,

BY THOMAS BUZZARD, M.D., F.R.C.P.

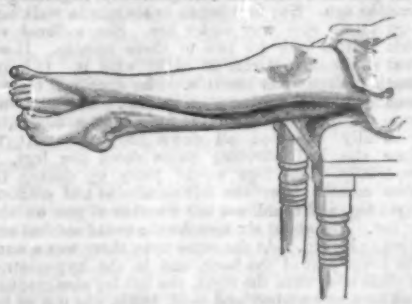
GENTLEMEN,—Before presenting to you a patient who is now in hospital suffering from loss of power in the lower extremities, with a spastic condition of the muscles, I wish to call your attention to a few points bearing generally upon this pathological condition. A form of spastic paraplegia has been described by Seguin, Erb, and Charcot, which comes on gradually, and is apparently, though this is not by any means certain, protopathic in its origin. It is usually associated with systematic sclerosis of the lateral columns of the cord, and this sclerosis, so far as can be judged, is not a secondary degeneration due to a lesion higher up. Or there may be insular sclerosis of the lateral columns. It is apt to attack persons between the ages of thirty and fifty years, and is attended by loss of power in the extremities, accompanied by stiffness and exaggeration of the tendinous reflexes. There are no disorders of sensibility, and the functions of the bladder and rectum are commonly, though not invariably, unimpaired. This is not the form of which I shall show you an example, and I need do no more therefore than mention it. A much more common form is that in which, as a result of a lesion of the cord from compression, occurring either in the course of Pott's disease or from a tumour, or from diffuse myelitis with or without meningitis, there is a secondary degeneration of both lateral columns below the point of lesion.

You will remember that Waller found that whilst section of the anterior root of a spinal nerve was followed by degeneration which extended to the periphery, division of the posterior root between its ganglion and the spinal cord was attended by degeneration of that portion of the root only which remained attached to the cord. It appeared to him that whilst in the first case the spinal cord acted as a trophic centre of the nerve, in the second case it was the ganglion, not the cord, which played this part. We owe to Türck the discovery that in the spinal cord itself something occurs which appears to be analogous to Waller's observation. A destructive lesion of the cord which involves both grey and white matter causes degeneration, which is almost exclusively limited to the nerve fibres of the lateral columns below the point of lesion, and of the median portions of the posterior columns above the point of lesion. Now, we know practically nothing as regards any symptoms dependent upon change in this portion of the posterior columns. We cannot doubt that there are symptoms, but at present they have not been definitely associated with the lesion; but as regards the degeneration, or sclerosis (for that is the form which the degeneration takes) of the lateral columns, experience shows that this condition is attended with loss of voluntary power, a spastic state of the muscles, and excess of tendinous reflexes. You will see presently why I consider the patient who is now before you to be an example of this form of spastic paraplegia, and not of the primary form described by Seguin, Erb, and Charcot. Louisa P—— is twelve years old, and she was at school when her illness began in February, 1880. Her father is dead; her mother, I find from Dr. Beevor's notes, is said to be affected with shaking palsy. There is no phthisis in the family, and the girl has never had either scarlet or rheumatic fever. Without any evident cause, she found her legs giving way under her, and suffered from severe pains in her knees and legs, "like a needle running into them." Her legs would draw up spontaneously. She lost power so rapidly that in a fortnight she could not move her legs at all, and could not feel in them, or in her body below the waist. At first she could not turn in bed, and there was pain in her back when turned by others. A month after the onset the urine and fæces were passed involuntarily and without her knowledge. This trouble lasted three months, when she gradually began to regain consciousness of their passage, and later was able to restrain their discharge. The legs were not able to be moved by her till three months from the time of onset, and she has never been able to stand since the attack. The sensibility of the skin began to return more rapidly than motor power, within a month of the onset.

Within a week or two of the time of attack she suffered from bedsores, of which the scars are still plainly visible. There is one at the bottom of the spine, just above the cleft of the buttocks; and another, a puckered cicatrix, near the left trochanter.

Pausing here for a moment, let me note that this history is a perfectly different one from that to which I have just referred as belonging to idiopathic spastic paraplegia. The radiating pains in the lower extremities, the inability to be turned over in bed without pain in the back, point especially to spinal meningitis; whilst the total loss of power and absolute anæsthesia with paralysis of the sphincters, and occurrence of bedsores, leave us in no doubt that there was also myelitis. She has suffered, indeed, evidently from meningo-myelitis of a somewhat acute form. Her present condition is a consequence of this lesion of the cord.

Her legs, as you see, are not much wasted. They are very stiff, and resist movement. The feet are pointed in a position of rigid plantar flexion from permanent contraction of the sural muscles. On the other hand, the last phalangeal joints of the toes are strongly dorsal-flexed. The legs, when left to themselves, tend to cross each other



She can lift either heel off the bed, and can flex and extend the knee- and hip-joints. If, when the knee is flexed, I take hold of the leg and gradually bring it to a position of extension, it moves smoothly and easily till that position is nearly reached, when it suddenly becomes rigidly extended, and a good deal of force is requisite to bend the knee again. This phenomenon, which calls to mind the action of the blade of a penknife when you open it, has been styled by German authors "clasp-knife rigidity." The result of this spastic condition is that the patient cannot stand alone. You will note that slight taps upon the patellar tendon, or even on the knee-cap itself, cause excessive clonic reflex. On the other hand, if we try to obtain ankle clonus we fail. This failure is simply owing to the permanent contraction of the sural muscles, which renders the movement impossible. For the same reason tickling the sole of the foot is not attended by dorsal flexion of the foot. There is a slight loss of cutaneous sensibility on the right leg. The action of the sphincters is normal.

We have here, then, at the present time, the loss of power accompanied by a spastic state of muscles and exaggeration of tendinous reflexes, almost entire absence of sensory disturbance, and functional integrity of the sphincters which form the essential symptoms of what is commonly called Erb's spastic paraplegia. The case is, however, removed from that category, because the condition is manifestly a consequence of myelitis. It depends upon a degeneration of the lateral columns of the cords starting from the point at which the cord was inflamed. The complete immunity of the arms on the one hand, and the absence of wasting of the lower extremities (which must have taken place had there been myelitis in the lumbar region) on the other, enable us to locate the lesion in the dorsal region of the cord. Its cause of origin is not, however, so certain. The girl suffers from very pronounced lateral curvature of the spinal column, the deviation being to the left in the cervico-dorsal region, and to the right in the dorso-lumbar portion. Now, as we know, caries of the vertebræ, when it causes spinal deformity (which is not

always the case), is almost invariably associated with angular, not lateral, curvature, and this because of the bodies of the diseased vertebræ collapsing. But it is not impossible that in this case there may be caries (not yet very far advanced), which has started the inflammation of the spinal membranes and cord, especially as I find that the girl complains of pain on percussion over the lower portion of the dorsal region. I do not feel at all confident that the cause is what I have suggested, for her early symptoms were more acute and rapid than is ordinarily seen in Pott's disease, but as in any case support to this curved spinal column can only be beneficial, I purpose to have her swung and encased in a Sayre's jacket.

Let me now give you some details of another case of spastic paraplegia which we have lately had in the hospital.

A. B——, a young married woman, of fair complexion and not unhealthy aspect, was brought to the hospital on June 15th, 1880, unable to stand, or, indeed, to move her legs. The following notes of her case at the time of her admission were taken by Dr. Beevor, resident medical officer. She is twenty-seven years of age, and has been married for nine years; has never had children, but about three years ago miscarried at two months. There is no family history of any nerve disorder. She thinks she had rheumatic fever four years ago. There is no history of syphilis. Two years ago she fell down a flight of stone steps and knocked the back of her head. She was stunned at the time, but felt no pain in the back after the accident. Her present illness came on gradually, beginning about ten months ago. She first began to stagger in walking, and her legs would give way under her. She suffered very great pain in the back for two or three months. It was so bad that she could not rest at night with it. It hurt her very much to turn upon her side. She does not remember that touches upon the spine were painful. The pain in the back was between the shoulders for about a month, and then gradually extended all down the back. At the same time she had shooting pains down the legs, the right especially. The legs would jump up during the pains. Two months later she felt numbness and coldness in her right leg, and could not tell whether it was on the ground or not. For about six months she could not feel at all when it was pinched. At the same time there was a numbness in the lower part of the back, and in the hypogastric region. A little later than the right, the left leg also gradually failed and became numbed and cold, but it was not so bad as the other, and she never completely lost sensation in it. She has not been able to walk, or even to stand, for three months past. About three months ago she complained of a tightness around her body, but this has improved. Five months ago she found that she could not hold her urine more than three hours, and she was obliged to obey the call to micturate immediately. About two months ago the urine began to come away from her involuntarily. For about two weeks before it began to dribble she had lost power to pass water, and required hot baths to assist her. The bowels are always constipated. On one occasion they were moved without her knowledge.

Such was the history obtained at the time of her admission, when her condition was as follows. The head and upper limbs are normal. The spine presents a very slight lateral curvature in the lower dorsal region to the right. There is no angular curvature. There is tenderness, on percussion, over the third lumbar vertebra, and to a less degree over the second and fourth. The application of a hot sponge in this region causes her to wince more than when it is applied to other parts of the column. At the lowest part of the spine there is a commencing bedsore with spots around it. The legs are rather thin, but the thighs appear fairly well nourished, and there is no difference, in this respect, between the two limbs. She cannot move her legs or toes at all.

As soon as the legs are passively moved, or an attempt made to flex the joints, the muscles of the legs contract strongly. Much force is required to flex the knee-joints, which present clasp-knife rigidity. The patellar tendon-reflex is much increased on both sides. There is ankle clonus on each side. The cutaneous reflex in the soles is present, but sluggish. The cutaneous reflex of the hypogastric region is not obtained; that of the epigastrium is obtained but faintly. The cutaneous sensibility does not appear to be much altered, and she indicates correctly which toe is touched. The reaction of the muscles of the lower extremities to induced currents is practically normal. The patient can hold her urine for about an hour, and then if she does not answer the call at once it is passed involuntarily. Her urine contains a small quantity of albumen. The bowels are constipated. The heart sounds somewhat distant; there is no murmur. The ophthalmoscope shows no alteration in the fundus of either eye.

Such was the patients state on admission in the middle of June. She was placed on a water bed and treated with iodide of potassium in twenty grain doses.

A week after admission the following note was made:—Patient to-day held her urine for three hours and a half, the longest time during which she has been able to hold it since the beginning of her illness. She complains of pain in the lower part of her back and aching pains in the left knee. On June 29th she moved her right leg for the first time for three months.

On July 4th it is noted that the patient has moved the little toe of the left foot. She says that her legs do not draw up so much, and are not so stiff as they were, but they still jump a good deal at night. She retains urine now for three or four hours, and when she feels the desire to pass it she can control it for a longer time than she has lately been able to do. In the middle of July the patient was able to cross her right foot over her left voluntarily, to flex her toes a little, and to invert the left foot, but she could not extend or abduct the left ankle-joint. About this time she had a febrile attack with pain in the chest, furred tongue, pains in the lumbar region, and abdomen extending to the legs and knees. There was tenderness on deep pressure over the abdomen. The attack passed off, and at the beginning of September it is noted that the patient can lift both heels off the bed; the right better than the left. She can flex and extend the left ankle pretty freely, and can invert and evert it, though to a less extent. The right foot cannot be moved so freely as the left. She can flex the right knee readily, and if it is supported she can extend the leg upon the thigh. She cannot always flex the left knee, but when it is passively flexed and the thigh supported she can raise the heel off the bed. The limbs are much less liable to spasm. There is still much increase of the patellar tendon-reflex, but the ankle clonus, which is still readily obtained in the right foot, is with difficulty produced in the left. The cutaneous reflex is obtained in both soles. The patient can stand with assistance, and even walk a little between two supports. A burning pain is complained of in the lumbar region of the spine, and percussion is there painful.

Nov. 2nd.—She can walk with the help of one person. The feet are put down with caution, and there is a great tendency in the toes to curl upwards in over-extension. The patellar reflex is excessive in each leg. Ankle clonus persists in each foot, most marked in the right. There is no trouble whatever with the bladder. Little or no pain in the back. The dose of iodide on June 29th was increased to thirty grains, which she took, with an interruption of a fortnight, till the present time. The water bed was used for rather more than two months.

On November 24th ankle clonus ceased to be obtainable.

I hear from Dr. Beevor that the patient, who left the hospital a week or two ago, is now able to walk up and down stairs.

The resemblance of this case to the preceding one is very striking. In each there was pain in the back on turning over from side to side—a symptom which is peculiarly characteristic of spinal meningitis, as also were the shooting pains and spasmodic contractions of the legs with which each patient was affected. In this patient the bladder alone was paralysed, the rectum being almost spared. She presented a commencing bedsore in the same situation which was occupied by the deep scar of a healed sore in the other patient, its position being at the bottom of the spine, just above the cleft of the buttocks. It is in the sacral region, as Charcot has shown, that the bedsore of spinal origin is peculiarly apt to occur, that which is of cerebral origin (as happens occasionally, for example, after apoplectic seizures), being located towards the centre of the buttock, on the same side of the body as the paralysed limbs. These symptoms, along with the complete paralysis of motion and sensation, leave us in no doubt that here, as in the other case, there was inflammation of the substance of the cord as well as of its membranes.

You will have recognised, in the description of the spastic condition of her lower extremities, the close resemblance which the case bears in its advanced stage to that of the young girl who has been before you. But there are two very interesting points of difference on which I will say a

few words. In the first place this young woman began almost immediately to improve when she came under treatment by iodide of potassium, and a continuance of the same drug in increased doses has resulted in what is practically a cure. The other patient, who has been but a short time in hospital, has as yet manifested no signs of improvement under similar treatment. In the second of the two cases, I am disposed to refer the cause of the meningo-myelitis to syphilis, although there is little or nothing in the general history to confirm the diagnosis, the only circumstances which tell—and these but faintly—in this direction being the unproductiveness of the marriage and the miscarriage at two months. But I have long expressed the opinion that in certain lesions of the nervous system, when taken along with their behaviour under specific treatment, we have evidence which is at least as strong as the coppery hue of one skin eruption or the serpiginous character of another. The symptoms point to myelitis by compression, a lesion which, if we except traumatism, as far as my experience goes, when it is not due to Pott's disease, is much more often consequent upon syphilitic disease of the membranes of the cord than anything else.

There is a point of great interest in the second of these two cases. You will have observed that under treatment in the hospital the patient has to a very large extent recovered from the spastic condition of muscles which was so strongly marked at first. *Pari passu* with this the exaggeration of tendinous reflexes has been very greatly reduced, so that at the present time ankle clonus is no longer to be obtained. Now, this exaggeration of tendinous reflexes we know to be associated with sclerosis of the lateral columns of the cord. Have we, then, by treatment succeeded in removing the overgrowth of connective tissue, which, with accompanying atrophy of nerve fibres, essentially constitutes sclerosis? I do not think that this is at all probable, nor is such a supposition necessary. I have in a former lecture described a case of hysterical rigidity of the lower extremities, in which, when the patient was suddenly cured by the administration of ether, ankle clonus, which had been readily obtainable, could no longer be brought about. I pointed out also that exaggeration of tendinous reflexes was a very frequent condition in hysteria. Only a day or two ago I had to see a young lady suffering from hysterical mania in whom I found the tendinous reflexes not only in the ligamenta patellæ, but also in the wrists, as strongly marked as they are found to occur in spastic paralysis. It appears to me, as I have before remarked, that anything which interferes with the transmission of motor impulses from the cerebrum down the lateral columns of the cord will have the effect of exaggerating the tendinous reflexes.[1] The explanation of this appears to be that in this way the balance which normally exists between the reflex function of the cord and the controlling influence exerted from above (which is transmitted downwards by the lateral columns) is disturbed, and the reflex function, therefore, is exaggerated. Suspended transmission of motor impulses appears capable of causing similar results to those which arise from their mechanical interruption.

Now, sclerosis cannot occur suddenly. You cannot have a mass of fibrous tissue formed without some preceding change in the bloodvessels of the part. There is probably a hyperæmic condition, with a liquid effusion. One can readily imagine that such a state is perfectly well able to interfere, by compression upon the nerve fibres, with their normal function, so that the propagation of motor impulses is interfered with. Exaggeration of the reflex function of the cord would thus be brought about by interference with the arrival of controlling motor impulses. At the same time there is no reason to doubt that such an effusion might disappear under appropriate treatment. And this is what, I suppose, has happened in the case of this young woman.

[1] Dr. Hughlings Jackson has reported a case in which he obtained ankle clonus in a patient immediately after the occurrence of an epileptic fit, and Dr. Beever informs me that he has since had a similar experience in the case of an epileptic patient of mine, now in the hospital. In both cases the phenomenon did not persist.

VACCINATION GRANT.—Mr. N. Hannah, of the Ashton district in the Wigan Union, has received a Government gratuity of £30 4s. for efficient vaccination (second time).

ON HOSPITALS:

THEIR MANAGEMENT, CONSTRUCTION, AND ARRANGEMENTS IN RELATION TO THE SUCCESSFUL TREATMENT OF DISEASE, WITH REMARKS ON THE ORGANISATION OF MEDICAL RELIEF IN THE METROPOLIS.

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THE GENERAL HOSPITAL OF FRIEDRICKSHAIN IN BERLIN.

GERMANY possesses many fine hospitals, in which improvements in structural arrangements were apparently slow of adoption until the building of the Rudolf-Stiftung Hospital in Vienna in 1861, which was opened for patients in 1865. This magnificent institution, intended to accommodate 800 sick, all diseases being admitted except small-pox, was founded by the present Emperor in honour of the birth of his son, whose name it bears. The pavilion plan, as represented at that time by the Lariboisière Hospital in Paris, was not deemed suitable for the climate of Vienna. Hence, a combination of the corridor and pavilion principle was adopted, in which the latter is not, however, very prominently represented. The wards are spacious and lofty, the cubic space allotted to each patient is 1480 feet, and all the interna arrangements are excellent, while the great central courtyard is tastefully laid out as a garden. It is said to have cost £250,000 in construction, or about £312 a bed.

The works on Hospitals, with copious illustrations, by Dr. C. H. Esse, in 1868 and 1873, show a decided advance in the practical application of the pavilion principle in Germany; but it was in 1870, in the adoption of the plan since carried into practical effect in the Friedrickshain Hospital o Berlin, that the "new views" were accepted in their entirety. Hence I have selected it as a recent and complete type of a pavilion general hospital, perfect in all the details of its arrangement, as illustrating that form of construction.

The history of this hospital is extremely interesting, as showing how it was called into existence to meet a great public want, and how in the final arrangements the most eminent authorities in Germany were consulted—Virchow, Neumann, Kalske, Voigt, Esmarch, Baum, Von Langenbeck, Esse, and others of note,—and how their united voices, with a weight of authority unequalled, concurred in the principles advocated so long ago by Tenon, Bailly, and the eminent Frenchmen of that day.

The leading spirit in the matter was admitted to be the celebrated Berlin professor, Virchow; and Esmarch, still more renowned as a practical surgeon, expressed his satisfaction at the carrying out, for the first time in Germany, of the new ideas of hospital construction, and the science of health, particularly with respect to placing surgical cases in single-storied pavilions, with direct roof-ventilation, and the adoption of an entirely isolated building for surgical operations. These eminent men were of opinion, that in surgical wards for cases where there are injuries or operations, from twenty to thirty beds in a well-ventilated ward are not too many, if severe wounds and serious operations are treated in separate rooms, which should also be provided for traumatic tetanus, hydrophobia, and cases attended with delirium, &c. The provision of a sufficient number of such rooms is shown in the plans to be quite consistent with, and easy of adoption in detached pavilions.

The free admission of sun, light, and air to every part of a sick ward, the regulation of ventilation as much as possible by natural means, and in some classes of cases by open fires, the provision of day rooms, the careful regulation of the water-supply, the north and south exposure of the buildings, and the distance of the pavilions from each other (50 metres or 164 feet), the provision of an ice-house, and the proper distribution and careful arrangement of all the accessory buildings, administrative and economical, were the subjects of minute study and attention.

DISCREPANCY IN PRINT

FIG. 1.

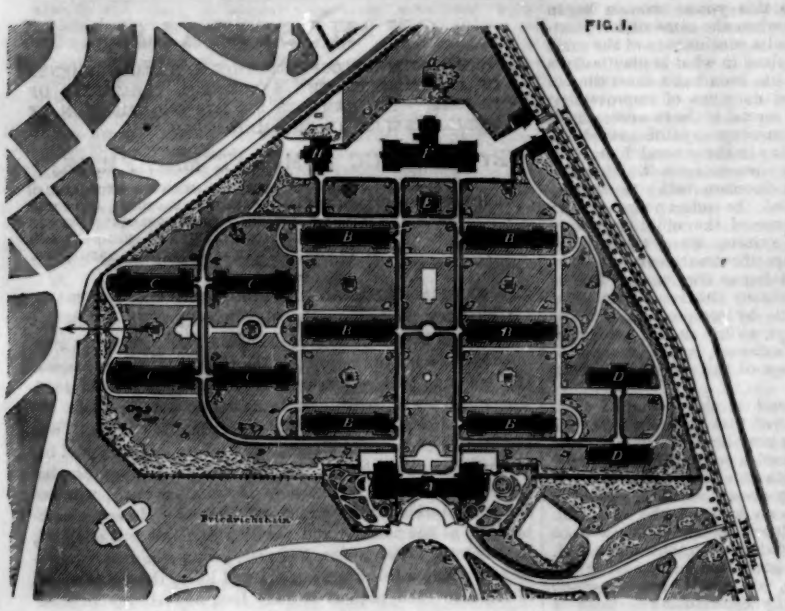
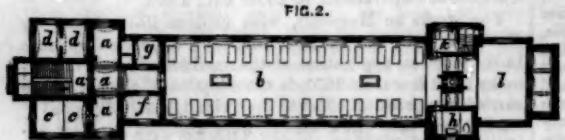


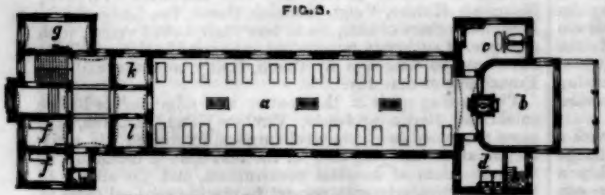
FIG. 2.



GROUND PLAN OF A TWO STORIED PAVILION.

a a a a, Corridors. *b*, Long ward of twenty-eight beds. *c c*, Double-bedded rooms. *d d*, Double-bedded rooms. *f*, Waiting-room. *g*, Tea-room. *h*, Bath-room. *k*, Lavatory. *l*, Day-room.

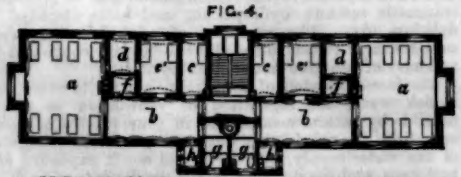
FIG. 3.



GROUND PLAN OF A SINGLE STORIED PAVILION.

The arrangements are very much the same as in Fig. 2, except that *f f* are single-bedded rooms and *g* is an operating-room, and the position of the baths and lavatory is reversed.

FIG. 4.



GROUND PLAN OF AN ISOLATION PAVILION.

a a, Eight-bedded wards. *b b*, Day-rooms. *c c c c*, Double- and single-bedded rooms, as marked. *d d*, Waiting-rooms. *f f*, Tea-rooms. *g g*, Bath and lavatories. *h h*, Latrines.

All the pavilions are self-contained, with every convenience for complete detached use.

In the double-storied pavilions, six in number (three for men and three for women), provision is made for sixty-four patients, the sick being placed in the two upper floors. These are for medical cases, and have twenty-eight beds in each long ward, and two small wards with two beds and two with one bed in each, for the separation of cases needing it. One hundred square feet of superficial space is allowed for each bed in these wards. On the ground-floor are nurses' and assistant-physicians' and waiting-rooms. On the two upper floors are spacious day-rooms, with tea-rooms, baths, water-closets, lavatories, &c., all suitably arranged, with the cutting off of all sources of impure air from the wards. In the cellarage are placed the heating and ventilating apparatus, with store-rooms for mineral waters, coals, &c., the bath reservoir, a couple of spare waiting-rooms, should they be wanted, and a corridor running the whole length of the building for communication with the entire pavilion and the lifts, of which one is provided for every pavilion. The ventilating arrangements provide for the admission by day and by night, at all seasons, of from 2200 to 2500 cubic feet of air suitably warmed for each bed, and means of bringing fresh cold air from without in such manner as not to cause draughts or inconvenience to the sick. The entrance and exit of air are so arranged as not to attain a greater velocity than 19 in. per second, at any point where a patient can be affected by it. The buildings are lighted by gas, which is carefully ventilated to prevent the results of its combustion being distributed in the wards. Measures are taken to prevent the exit of effete air from being injurious or finding its way into any part of the building, and registers are provided to regulate the amount of ventilation, which may at any time be doubled in case of need.

The single-storied or surgical pavilions, four in number, are on the north side of the great enclosure, two for males and two for females, each containing thirty-two beds. On the ground floor are, at one end, two single-bedded rooms, and rooms for the assistants and physicians, and at the other the warm water reservoir, the clothing store, and a large room for the attendants. Above this is the long ward, with twenty-eight beds, two in each pier, with one bed at each end on both sides. On the left hand are two single-bedded rooms, and an operation-room, with a tea-room and a waiting-room. On the right is a large day-room, a bath-room, with two fixed baths and one movable, with washing basins, and in the opposite corner watercloseta. The ventilation of these surgical pavilions is very complete for both summer and winter, by windows, openings near the floor, and along the ridge of the roofs. On the cellar floors are the warming and ventilating apparatus, with waiting-rooms, fuel stores, &c.

There are two isolation pavilions, one for males and one for females, containing forty-four beds in each. On each floor are two large wards, containing eight beds in each, two double-bedded and two single-bedded rooms, with two large day-rooms, and small tea- and waiting-rooms. There

are also baths, lavatories, waterclosets, and all the necessary accessories on each floor. On the cellar floors are the heating and ventilating apparatus, with the usual accommodation. Each pavilion is self-contained, the entrance doors are placed opposite each other, and both are in a separate enclosure, and approached by a separate access, so as to effectually isolate them from the other wards in the general enclosure. They are intended for the treatment of cancer and other malignant diseases which are unsightly, of ophthalmic affections, and the infectious fevers. Of the prudence of placing these different classes of disease in the same building, some contagious and others not so, I am by no means sure.

The superficial area on which the buildings stand, and which also contains the gardens and open spaces in the enclosures, appears to be a little more than twenty acres. The hospital being for 600 beds, there is no pressure of population on area in the arrangements.

From the small plan which accompanies this brief sketch, the form of the land will be seen to be irregularly triangular, and the detached buildings to be—A, the administrative departments in front; B, the six double-storied medical wards, right and left of the main entrance; C, the four surgical pavilions, single-storied, to the left of these; the two double-storied isolation-wards, D, to the right of the main entrance; E, the great bath house, in the immediate rear of the centre, the great economy building; on the left the mortuary, H, with a separate entrance for funerals; behind it, G, the ice-house, and to the left separates gates, and means of access to all these departments. In the rear of the mortuary is a lime-pit. The whole of the interspaces are gardens, accessible to the sick; the small white, oblong space in the central garden is the site of an intended chapel, and on the left, in the surgical enclosure, is that of a projected building for operations. These may have been supplied since I visited Friedrickshain, for the plans before me are dated 1876.

It would occupy an amount of space which I cannot venture to ask for, to attempt a detailed account of the administrative and economical departments, with the other accessories above mentioned. They struck me as more complete and perfect in all their details than any places of the kind I had seen elsewhere, at the time of my visit. The whole cost of the grounds, buildings (which are well constructed and of considerable architectural pretensions), and the details of arrangements (which are of true German thoroughness, leaving nothing unforeseen or unprovided for) was 4,520,789 marks, or about £377 a bed. A hospital of similar character in general design, but with differences of detail, has since been erected on the banks of the Necker, in connexion with the University of Heidelberg. The plans and description of it, by Professor F. Knauff, were published in 1879, in Munich. I preferred, however, describing that which I have myself seen, and which has now been sufficiently long in practical operation to test its merits, and defects, if there be any, and I hope that some German member of the approaching International Congress will make us acquainted with the results in a detailed statistical form, for which the materials doubtless exist.

(To be continued.)

THREE CASES OF ACUTE SUPPURATIVE ARTHRITIS IN INFANTS.

WITH REMARKS.

BY G. A. WRIGHT, F.R.C.S.,

SURGEON TO THE HOSPITAL FOR CHILDREN, PENDLEBURY, ETC.

THE disease of which the following cases are instances is one of which I think inadequate descriptions are given in discussing the affections of joints in children, and of which Mr. Thomas Smith has alone, as far as I can discover, given us a really complete account in his paper in the St. Bartholomew's Hospital Reports for 1874; and yet it is a condition which cannot be very rare, as Mr. Smith records twenty-one instances of it, and speaks of them as a selection only out of a larger number, while the great fatality occurring among these cases, and the urgent need for prompt treatment, make the recognition of the tendencies of the disease all important. The affection is that of primary or acute suppurative arthritis occurring in infants at any time during the first year of life or thereabouts. The disease is acute in its onset, it generally affects but one joint at first, and it produces great depression of the child's powers; it is exceedingly destructive, not only to the joint, but to the ends of the bones forming the articulation, in which, indeed, the lesion originates.

CASE 1.—Hannah H——, eleven weeks old, was admitted under my care into the Hospital for Sick Children at Pendlebury on October 8th, 1880, with the following history. When fourteen days old a swelling was noticed in the calf of the left leg; this disappeared, and the child was then said to have had an attack of erysipelas of the thigh and groin, and then the inflammation seemed to focus itself in the left knee, below which an opening formed, and from this discharge had escaped up to the time of admission. The child had been suckled and had had no injury or other illness. There was no history pointing to syphilis. On admission the left knee was much swollen and very painful. Just below and in front of the joint was an opening discharging pus; this led down to a softened patch in the head of the tibia. The child was very ill and marasmic, and its temperature rose at times to above 103°. On exploring the sinus, soft carious bony detritus was felt and gouged away from the upper part of the bone, and it was found that pressure upon the knee-joint caused pus to well through an opening in the articular surface of the tibia into the wound. The joint was then freely incised on each side of the patella, and a drainage-tube passed through it. During the first twenty-four hours the child had carboluria, after this it improved a little for a day or two, but again sank, and died on Oct. 21st. On examining the knee, the joint was found to be completely disorganised, and the upper end of the tibia destroyed.

CASE 2.—Martha R——, aged thirteen months, was admitted on Oct. 1st, 1880. Two months before admission the child had measles, followed by temporary albuminuria, but soon completely recovered. One month later pain and swelling appeared, extending from the hip to the knee. Fourteen days before admission she became feverish, with vomiting, and much pain in the limb. There was no history of injury; the family history was good; the child had been suckled and had never walked. On admission she was very anæmic and worn; there was great swelling round the right hip, reaching up to the buttock, into the groin, and over the lower part of the abdomen, where fluctuation was well marked; the superficial veins were much distended. On Oct. 7th the abscess was opened antiseptically, after the child's condition had been somewhat improved by careful feeding, and six or eight ounces of pus escaped. On exploration with the finger the head of the femur was found to be exposed and rough, and the joint entirely disorganised; the wound was washed out with carbolic acid (one in forty). There was no bleeding of any importance. The same night the child was collapsed and carboluria appeared; this, however, passed off the next day, and up to the 15th she improved somewhat, but there was still free discharge, which was exhausting her; and on the 17th the upper end of the femur was removed, and a small, rough, carious button of bone, covered with granulations, was found to be the only representative of the head and neck of the femur. The operation was antiseptic. From this time the child did uninterruptedly well, and rapidly gained flesh and strength; and on Nov. 16th the wound had entirely healed, and she is now (Nov. 28th) well, and has considerable power over the limb, which is barely half an inch shorter than the sound limb.

CASE 3.—Anna B——, aged nineteen days; admitted Nov. 5th, 1880. The child was said to have been healthy at birth, but fretful. It was suckled, and there was no syphilitic family history. The account stated that it was a "cross birth," and the mother was attended by a midwife, who "helped" the labour. A day or two before admission the child was apparently in pain, and vomited; and on Nov. 4th a swelling was noticed round the right shoulder.

On admission a large fluctuating swelling, without much redness, was found surrounding and obscuring the right shoulder. The child seemed to be fairly well.

On Nov. 6th the abscess was opened antiseptically, and carefully explored with the finger. A large sac was found surrounding the front and outer side of the joint, but no communication with the interior of the joint could be felt, and it was concluded that the abscess was probably peri-

articular, and due to some violence used by the midwife at the time of its birth.

The child went on well until Nov. 16th. There was no heat or tenderness about the shoulder, but it discharged rather freely. The temperature ranged not higher than 100·4°, and the abscess nearly healed. On the 17th a slight swelling was noticed over the right parotid region, and this proved to be an abscess; and on the 18th an abscess appeared over the lower part of the sacrum. Temperature 101·6° to 99·6°. The child took its food well, and did not seem very ill. The abscess over the parotid was aspirated; the one over the sacrum left alone. On the 19th a large abscess was found round the left hip and upper part of the left thigh; the whole leg below was œdematous, and roughness could be felt on moving the joint. Temperature 98·6°. She still took her food well, but was pale. On the 20th the abscess over the left hip was opened antiseptically and carefully explored; no communication with the joint could be felt. The facial abscess refilled, and on the 24th discharged through the ear. There was a great deal of discharge from the hip, which looked unhealthy and was septic. There was much induration round the wound and neighbouring parts. The child went on in much the same state till Dec. 4th, the opening in the shoulder having entirely healed, and no fresh abscesses appeared. The child then got worse, and was sick and refused its food. This and the unhealthy condition of the hip induced me to explore the wound afresh; and so, under chloroform, the wound was examined, and the joint felt to be rough and disorganised. The upper end of the femur was dissected out and removed with a scalpel. No trace of the head of the bone was left; a small hollow in the upper part of the great trochanter, with a few little bony granules upon it, was all that represented the head and neck of the bone. There was very little bleeding, but the child was very low. In the evening it took its food and was quiet. On the 6th there was some carboluria; the child was pale and weak, and vomited twice. During the next two days it sank, in spite of stimulation and careful feeding, and died on the 8th. The carboluria lasted only a few hours.

Necropsy.—On examining the hip, the wound was found grey and sloughy; the upper end of the femur was unhealthy. The acetabular cartilage was soft and discoloured, but not eroded. The child was much wasted, and scattered about the body and limbs were numerous cutaneous pyæmic abscesses. On exposing the right shoulder, the joint was found completely gone, and no trace of the head or neck of the humerus remained. Some repair had taken place, and the wound was soundly healed over the joint, which contained no pus. The abscess over the parotid was empty and healed. The abscess over the sacrum communicated with the lower sacral joints, which were disorganised. In the abdomen some recent lymph was found coating the spleen, but no other peritonitis. In the liver were two pyæmic abscesses, one immediately beneath the capsule, and the other rather deeper. In the right kidney was an abscess occupying almost the whole of one pyramid, and the corresponding amount of cortex. The upper lobe of the right lung was pneumonic, and there were scattered patches of pneumonia with abscesses throughout the rest of the lungs. The brain was not examined; there was no pus in either knee-joint.

Mr. Holmes, and more particularly Mr. Smith, have pointed out that the disease frequently, if not always, begins as a subarticular ostitis, which often penetrates the joint, and of this Case 1 was a typical instance. Mr. Smith, as well as other writers, point out the difference between this disease and the so-called "syphilitic decapitation of the epiphyses," or "syphilitic telostitis," in which the seat of the disease is between the epiphysis and diaphysis, and abscess may or may not occur, while many bones are affected. In the three cases here recorded there was no evidence of any syphilitic taint. A noteworthy point in these cases, alluded to by Mr. Holmes, is the great extent of the primary inflammation, which seems to attack a large area of the limb before it concentrates itself upon the particular joint, and this gives rise to the question whether it is possible that the lesion is primarily a general phlebitis of the limb, in which the veins of the bones are involved, whilst the centre of ossification of the epiphysis being one of the most vascular parts in the neighbourhood, suffers most, for there seems to be little doubt that the disease is a true ostitis, and that the joint affection is secondary by extension. In that case it would resemble rather in its pathology the cases so often seen of acute periostitis, differing from them in that the inflammation is central rather than peripheral, and attacks the epiphyses rather than the shafts of the bones, while the syphilitic disease has a more chronic course, and affects the end of the diaphysis, or the epiphysial line rather than the ossifying nucleus of the epiphysis. In some of Mr. Smith's patients, however, it appears that the disease did begin in the end of the diaphysis. This probably was in cases where the epiphysial nucleus was not as yet developed. Hence, I think the disease is not improbably an instance of a true osteo-phlebitis going on to abscess; and on this view its multiple development is more readily explained if the cases where many joints are attacked are, as I think, all pyæmic.

The third case is, perhaps, of greater interest even than the other two, for it presented considerable difficulty in diagnosis as well as important pathological features. In spite of my attention being specially alert for such cases, the result of the examination of the shoulder certainly seemed to point strongly at first to the conclusion that the case was not one of infantile arthritis, but probably merely a traumatic abscess. When the other abscesses appeared the case was somewhat altered, and it was considered probable that the abscesses were pyæmic, at the same time that they might be multiple articular abscesses if that condition was not pyæmic, and so when the abscess round the hip was explored, and no communication with the joint made out, the difficulty was not lessened. When it was at last found that the hip was disorganised the case was clear, and no doubt could then exist that the case was one of pyæmia, and probably that the primary lesion was of the shoulder-joint, and, therefore, that the cases of multiple infantile arthritis are in all instances truly pyæmic; and this had been considered probable from the account of Mr. Smith's cases and the apparent pathology of the disease. In three of his cases, indeed, Mr. Smith was satisfied that pyæmia did exist. The three cases illustrate well the destructive tendencies of the disease both to life and joints, and, I think, the necessity for early and complete removal of the source of mischief by operation, I have little doubt, from the progress of the second case after operation, that the first child would have got well had the disease been removed earlier, but one feels very loth to perform amputation at such an age, and nothing else would have been efficient. About Case 3 there is more doubt, though I incline to the belief that excision of the shoulder at first would have been the right treatment, though a decision upon the point is difficult; if it had been made out at first that the shoulder-joint was implicated, removal of the head of the bone would certainly have been performed, though whether that would have had any effect in preventing the development of pyæmia is not clear. It is certain that the shoulder-joint itself would have recovered, as far as disease of the bone went, though not without entire loss of the head of the humerus, but the joint would have been stiff, and, therefore, excision of the head of the bone would have probably done no harm, at least as regards the joint, and, possibly, good as removing an infective pyæmic centre.

On the whole, I think the lesson of this third case, like the others, is, operate early and remove the disease; and I think the conclusion from all the cases, Mr. Smith's and my own, is that if the abscesses are multiple they are pyæmic, though the pyæmia is of rather an unusual and chronic type, in that there is no great amount of pyrexia. Of the twenty-one cases recorded by Mr. Smith thirteen died, and in none of these was any operation, except opening the abscess, performed, in the others more or less useful limbs resulted without further operation; but I cannot help thinking that in these cases the amount of repair required, if the diseased part is not removed, makes too great a demand upon the already over-taxed powers of the child, and that the results would be better if the disorganised bone was removed and the progress of the disease arrested. As to the etiology of the disease, in four of Mr. Smith's cases there was a history of injury, and in one of scarlatina. In one of my own cases there was a history of measles, and in another of possible injury; but there appears no doubt that the disease most commonly arises spontaneously. The drawback of the depressing effects of carbolic poisoning was felt in all these cases, which seem peculiarly susceptible to it, though there was no albuminuria.

NOTE.—Since writing the above, Mr. Morrant Baker's report of two additional cases of this disease (St. Bartholomew's Hospital Reports, 1880) has come under my notice.

CASE OF LEPROSY OF THE LARYNX.

BY GEORGE MACKERN, M.D. LOND.

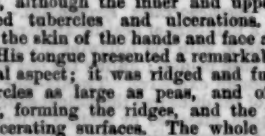
WHILE staying lately at Luxor in Upper Egypt my attention was drawn to a beggar by the roadside who demanded "backsheesh" with such a peculiarly hissing sound of voice that I stopped to look at him more closely. Seeing some peculiar tubercles about his face and hands, I thought possibly this might be a case of true leprosy with implication of the larynx. I examined his throat at once with the laryngoscope and in the open air, the magnificent sunshine of Egypt enabling me to throw a most brilliant light into the larynx. I made a few notes at the time, and also a drawing of a disease which is but rarely seen in England, and the laryngeal manifestations of which are but shortly described even in Mackenzie's latest work on "Diseases of the Throat." I may add that leprosy is rare in Egypt, though common enough in Syria and Palestine.

The following is a short history of the case:—

A. Z——, a Syrian, aged forty-five, had come to Egypt since the development of his disease. He had been ailing for six years, but had developed leprosy during the last four years only. During this latter time he had suffered from progressive loss of strength and energy, and had soon become unable to do any manual work. The leprous tubercles appeared early in his illness, first in his face and hands, subsequently in both groins, and more recently along the dorsum of his tongue. The tubercles had developed slowly, and showed but little tendency to ulceration. He never suffered from itching, but complained of loss of sensation in the parts affected. (Remarkable evidence of this was afforded afterwards by the examination of his epiglottis.) During the last few months he had rapidly lost his voice, phonation being accompanied by a peculiar kind of hissing sound; previously to this his tongue had become affected, and his nose also became clogged up, interfering with his breathing. Had never suffered from cough, and apparently was free from any serious visceral disease.

Present condition (March, 1881).—Old and haggard in appearance, skin dry and shrivelled-looking, wasted and feeble, and losing strength daily. On both sides of his nose and cheeks there were a number of smooth, rounded, and hard tubercles of yellowish-brown colour; a few were also present at the anterior nares; one or two only were ulcerated, the rest being either quite smooth and shining, or covered with a branny desquamation. Tubercles of a like description were present in both groins, and on his hands on the palmar and dorsal surfaces, but the feet appeared free, although the inner and upper part of the thighs showed tubercles and ulcerations. There was anæsthesia of the skin of the hands and face and upper part of the legs. His tongue presented a remarkable appearance along its dorsal aspect; it was ridged and furrowed by the disease, tubercles as large as peas, and of a distinctly yellow colour, forming the ridges, and the furrows being formed by ulcerating surfaces. The whole tongue was a horrid sight, but there were no deep excoriations suggestive of late syphilitic affection.

Throat and Larynx.—The fauces were free from tubercles, but the epiglottis was a typical example of the disease as manifested in the larynx. The epiglottis was enlarged and



much thickened, its edges were quite rounded and curled in towards each other. The whole was of a pale greyish colour, and along the upper convex margin on the left side were seen three tubercles projecting from the surface, and of a yellow colour, one especially being of a bright orange colour. No ulceration was observed anywhere in the epiglottis. On testing with the laryngeal probe I found that the whole surface of the epiglottis was perfectly *anæsthetic*, no reflex action or cough being produced, though I probed as far as I could reach. It subsequently transpired that during the last few months the man had frequently choked at his meals, this being due, no doubt, to the anæsthesia of the epiglottis. In consistence the epiglottis was firm to the touch, giving the idea of an infiltration with some dense material. The tubercles in the edge of the epiglottis exactly resembled some of those on the tongue, so I have but little doubt that they were leprous tubercles. It was impossible to see well into the larynx, owing to the size and shape of the epiglottis. I could only see a little of the arytenoid cartilages, which appeared to be pale and somewhat larger than normal.

No treatment was attempted, as I was only passing through the place; but as it is a perfect example of a rare disease, I made the above notes of it at the time.

Remarks.—The literature of the laryngeal manifestations of leprosy is scanty. The above description agrees closely with that given by Virchow, and with the first two cases given by Mackenzie.[1] But to these descriptions I can add in my case distinct tubercles in the epiglottis and the complete anæsthesia of that valve, a point hitherto not described, I believe. Besides, the man gave a very fair and reliable history of his terrible disease.

Beckenham.

UTERINE ELECTRO-THERAPEUTICS.

BY J. DIXON MANN, M.D., M.R.C.P.

(Concluded from p. 50.)

THE subjoined cases are selected as illustrative of the practical bearing of the foregoing remarks.

CASE 1. *Congenital atrophic uterus* (often called infantile uterus).—Miss ——, first seen on July 15th, 1876, was then eighteen years of age. She was a spare, rather undersized girl, with prominent sternum, ill-developed mammæ, head of the hydrocephalic type, complexion and general appearance healthy; possessed average intellectual powers, and had always enjoyed good health. Her mother informed me that the patient had never menstruated, nor had she experienced any of the usual menstrual molimina. The patient has three sisters, two older and one younger than herself, all of whom are well developed, and who severally commenced to menstruate from the fourteenth to the fifteenth year of age. The eldest sister is married, and has two children. Examination, by means of a sound in the bladder and the finger in the rectum, revealed the presence of an imperfectly developed uterus. Vaginal examination showed that the cervix and os uteri were small, but in other respects normal: the uterine cavity measured 1⅝ in. I advised the local application of electricity in order to stimulate the nutrition of the womb, but the patient preferred to wait and trust to time and "nature." Compound iron mixture with compound decoction of aloes were prescribed, and the medicine was taken regularly for some time. During the subsequent treatment no medicine was taken. The patient again consulted me in August, 1878, after an interval of two years; her general condition and that of the uterus were precisely as before. Being now anxious to submit to treatment, an insulated sound, forming the cathode, was passed into the uterus, the anode being placed alternately over the lumbar spine, and over the abdomen in the ovarian region, and a current of seventy-five dix-millivebers (equal to about twenty cells) passed for fifteen minutes, the applications being made twice a week. The treatment was uninterruptedly continued, and in November, 1878, the dimensions of the uterine cavity had increased to 1¾ in. In January, 1879, the measurement was 2¼ in. On the 15th of the same month the patient complained of slight pain in the back, with a feeling of tension and uneasiness in the hypogastric region. The symptoms indicating an attempt at menstruation, the induced current was substituted for the constant current, one electrode being in the uterus, the other over the lumbar spine. The application was followed on the evening of the same day by a slight coloured discharge. The constant current was reapplied once a week until the beginning of February, when a recurrence of the previous symptoms again suggested a change to the induced current, which was followed by a discharge, greater in quantity than before. The following

[1] Diseases of the Throat and Nose, p. 400.

month similar treatment produced a still greater discharge. The uterus now measured 2⅜ in., and the mammary glands had undergone considerable development. The constant current was discontinued, the patient being told to return when the before-mentioned symptoms returned. This took place on March 20th, when an application of the induced current was followed by a copious discharge, which lasted three days. All treatment was now discontinued. On April 24th the catamenia spontaneously appeared and lasted four days; the patient has since menstruated with average regularity.

Remarks.—This case was one of retarded growth, sometimes called "uterus parvus," in contradistinction to those cases in which the infantile condition of the organ persists in adult life. In the latter the body of the uterus is rudimentary, the cervix representing almost the entire bulk of the organ; in the above case the relative proportions of body and cervix were normal. The total absence of improvement during the two years which intervened between the first and second examinations lends additional interest to the case, and affords reasonable grounds for concluding that without treatment the uterus would have been permanently incapable of performing its functions. A second and similar case was successfully submitted to like treatment; the catamenia appeared in a little over five months, the initial want of development being less than in the case just recorded.

CASE 2. *Secondary amenorrhœa.*—Miss——, aged twenty-eight, consulted me in February, 1880, on account of arrested menstruation dating from a severe illness in 1878. The patient was of good physique; gums and conjunctiva healthy in colour; heart-sounds normal, and general health good; there was entire absence of the menstrual molimina. Previous to the illness alluded to, menstruation had been regularly performed from the age of fifteen. The patient was very desirous for a return of the catamenia and had previously consulted a physician in London, who in addition to various emmenagogues had prescribed the use of electricity, but owing to family circumstances the latter treatment had not been carried out. Vaginal examination revealed nothing abnormal. The treatment consisted in passing a current of seventy-five to eighty dix-millivebers (about eighteen or twenty cells) for ten minutes twice a week, the cathode being represented by an intra-uterine sound, the anode by a large disc placed over the ovarian regions. At the end of three weeks the induced current was substituted for the constant current, the position of the electrodes being as before. The second application produced slight pain followed by a profuse leucorrhœal discharge. Treatment was suspended for three weeks, the use of the induced current being then resumed. The second re-application was followed by a leucorrhœal discharge which in a few hours became tinged with blood. After a further interval of a little over a month, the patient began to menstruate *secundum naturam*, and has since been quite regular.

Remarks.—This was one of those by no means uncommon cases where, from the effects of an enervating disease, the uterine function is arrested and remains dormant after the system has regained its normal tone. In the above case there was no organic change in the uterus, nor presumptively in the ovaries, therefore all that was required was to rouse these organs from their state of quiescence. In some cases of prolonged cessation of the catamenia the uterus becomes more or less atrophied, the ovaries having probably first shared a like fate, the result, in many instances, of perimetritis. Such cases, it is needless to observe, are incurable. A typical case of this description that I saw some years ago occurred in the person of a married woman of about thirty years of age, who had been acatamenial since the birth of a child, seven years previous to my seeing her. The uterine cavity measured only 2½ inches. Electrical treatment was tried for some months without producing any beneficial result. It is well known that the medicinal treatment of obstinate amenorrhœa is most unsatisfactory; the importance, therefore, of a remedy like electricity cannot be overrated. Electricity occupies a special position in the treatment of this disorder, being in many cases perhaps the only agent capable of affording the requisite stimulus to the uterus and ovaries. It has only one disadvantage—the necessity for internal application, for in the mildest cases only does the external use of electricity produce the desired result. This is undoubtedly a grave objection as regards the unmarried, and one which restricts its use to those cases in which the resources of ordinary treatment have been exhausted, or where an accurate diagnosis demonstrates the futility of any but direct treatment.

CASE 3. *Menorrhagia.*—Mrs. ——, a widow of about thirty-seven years of age, a non-plethoric multipara of healthy appearance, was attacked in November, 1879, with profuse menorrhagia, which resisted ergot and the other astringents usually prescribed in such cases. The uterus was therefore swabbed out with a solution of perchloride of iron, which quickly checked the hæmorrhage. The patient for many years had been subject to attacks of menorrhagia, to restrain which the tampon had been frequently used; during the last two or three years the attacks had become more troublesome. On examination a few days after cessation of the hæmorrhage, the os was found patulous and the cervix tumid but not painful. After dilatation of the cervix, a careful examination failed to detect the presence of any neoplasm in the uterus. There were no villous or papillomatous growths from the mucous membrane, which was atrophic rather than hypertrophic. The uterus appeared to be in a state of passive hyperæmia, due to want of muscular tone, with imperfect proliferation of the mucous membrane. There was no evidence of any intrinsic cause for the congestion other than the one named. There was entire absence of pain; the position of the womb was normal; a sphygmographic tracing of the radial pulse showed the absence of high arterial tension; there was no blood dyscrasia, nor was there any cardiac or other obstruction to the general circulation. Rest and electro-stimulation were prescribed; the treatment, however, was not commenced until after the patient had again been prostrated by a copious hæmorrhage, which on this occasion yielded to rest and medicinal astringents. A current of eighty-five to ninety dix-millivebers (about thirty cells) was applied for fifteen minutes twice a week, the cathode being intra-uterine, and the anode on the lumbar spine. The treatment extended over several weeks with the necessary interruptions; the result was that the uterus recovered tone, the os was contracted, and the cervix firm. The catamenia, which have since appeared regularly, have only once been excessive, and that comparatively to an inconsiderable extent.

Remarks.—The uterine congestion was probably due, in the first instance, to sub-involution after the last parturition. The patient's habits tended to perpetuate the condition thus initiated; she was engaged in business, and, being of an active disposition, took little rest, maintaining the erect posture twelve hours out of the twenty-four. The treatment was based upon the following assumptions:—That the hyperæmia had produced little, if any, sclerosis of the womb, therefore that the current would gird up the loose tissues permeated by the gorged vessels, and, by virtue of its vaso-motor power, would promote activity of the uterine circulation; that the mucous membrane would be stimulated to increased development by direct contact of the cathode with the proliferating surface.

CASE 4. *Dysmenorrhœa spasmodica.*—Mrs. ——, aged twenty-six, a nullipara of healthy appearance, consulted me in August, 1879, with the following history:—Menstruation had always been painful; during the last twelve months the pain had become excessive. Twenty-four hours before the appearance of the discharge the patient suffers from agonising abdominal pain, attended by profuse sympathetic vomiting, the pain and systemic disturbance obliging her to keep her bed for the first day, at least, of each period. The discharge is below the average in quantity. The patient is free from hysteria, her general health being perfect in the intermenstrual intervals. A full-sized sound was passed without difficulty, but the introduction of it was attended by much pain. The uterus was not flexed, nor were there any indications of congestion. An exhaustive trial having been previously made of the ordinary therapeutic remedies, it was determined to make use of the constant current. The anode was introduced into the uterus, the cathode being applied to the lumbar spine, and a current of from seventy-five to eighty-five dix-millivebers passed for ten minutes three times a week. The first subsequent period was unattended with vomiting, and the pain was greatly diminished. Treatment was resumed in the interval. During the ensuing nisus the patient was so much better that she declined further treatment, all the distressing symptoms having ceased with the exception of a bearable amount of pain at the commencement of the flow. The amelioration, so far, has been permanent.

Remarks.—The tendency of the present day is to regard dysmenorrhœa as a disorder of mechanical causation, the pain being supposed to be due to the efforts made by the uterus to expel its contents through a preternaturally constricted orifice. With cases of this class electricity has

nothing to do. Many physicians, however, do not acquiesce in the almost universal application of the mechanical theory. Dr. Matthews Duncan[1] states that the pain produced by mechanical causes is much less severe than that of simple, non-obstructive dysmenorrhœa; he also states that he has proved the absence of stenosis of the cervical canal (a stenosis said to be caused not only by permanent stricture, but also by temporary tumefaction of the mucous membrane at the catamenial period) by passing a bougie into the womb whilst the patient was in the agonies of dysmenorrhœa. The now old-fashioned term "neuralgic dysmenorrhœa" still expresses all that is known of the causation of many cases of this disorder. All that can be diagnosed, in an otherwise healthy uterus, is an irritable condition of the mucous membrane of the cavity, which, under certain circumstances, evokes painful, clonic contractions of the organ. In such cases, when the sound reaches the uterine cavity, the patient experiences pain identical with that of dysmenorrhœa, the contact of the instrument with the neurotic membrane being sufficient to set up irregular uterine action. In this form of the disease much relief is afforded by electricity, the result probably of altered nutrition, and of the direct action of the current on the terminal nerves. Associated more or less with dysmenorrhœa is ovarian irritation or neuralgia. When not dependent upon uterine disease this disorder may be successfully treated by electricity on the principles already laid down. It is often sufficient to administer a current of eighty-five or ninety dix-millivebers by means of external electrodes, the anode being placed over the affected ovary or ovaries, and the cathode over the lumbar spine. If the accompanying dysmenorrhœa is urgent, it is preferable to introduce the anode into the uterus, and apply the cathode over the ovarian region. If there is suspicion of ovaritis electricity is not admissible; but tenderness, with slight enlargement of the organ (recognisable on bimanual examination), with absence of systemic disturbance, is probably due to passive hyperæmia, and is often greatly relieved by the constant current. The relief afforded in simple ovarian irritation is frequently very striking, a soothing effect being experienced by the patient almost as soon as the circuit is closed. In many cases the result of the treatment will be rendered more permanent by the administration of the following nervine tonic:—Valerianate of zinc, valerianate of quinine, valerianate of iron, of each one grain, made into pill; one to be taken twice a day. The pills should be protected by an impervious coating, as the combinations of valerianic acid have an exceedingly disagreeable odour. Some forms of sub-involution of the uterus are amenable to the action of electricity. Retarded involution cannot be regarded as a disease *per se*, but rather as the result of one or more morbid conditions. Retention of fragments of placenta or membranes, inflammation of the cervix from laceration or bruising during labour, and partial prolapse are amongst the more common causes. It is obvious that sub-involution thus produced can only be cured by the removal of the exciting cause, and this is to be accomplished by means other than electricity. Simple sub-involution dependent upon muscular atony, or upon malnutrition, alone comes within the range of electro-therapeutics. For the treatment to be successful it is essential that the disease should be attacked in the early stage. It is well known that prolonged hyperæmia produces hyperplasia of the areolar tissue in the organ or part affected. When once this stage of sclerosis is reached in the uterus, and an excess of fibrous tissue obtains over the muscular elements, absorption becomes a matter of grave difficulty, if not an impossibility. In dealing with an hypertrophied uterus composed of a mass of muscular fibres infiltrated with fluid, and but sparingly so with cellular growth, any method of treatment which will stimulate the nutrition of the organ and accelerate the absorption of the morbid products tends to promote a cure. Such a stimulant is electricity. Unless contra-indicated an insulated sound forming the cathode is introduced into the uterus, the anode is placed over the lumbar spine, and a current of about ninety dix-millivebers is passed for ten or twelve minutes every alternate or third day. During the first half of each application the current should be stabile; during the latter half it may be interrupted at intervals, in order to stimulate the contractile properties of the womb. Whilst the interruptions are being made it is desirable to reduce the current-strength, as the opening and the closing of the circuit are attended by slight shocks, which are very disagreeable if too strong. The patient should maintain the horizontal posture for some hours after each application. If the uterine wall is so soft as to render the passage of a sound dangerous a cervical electrode may be used in place of the sound. In a case of sub-involution which I recently treated with electricity each application was followed by a temporary discharge and slight pain of the after-pain type; the uterus was reduced to its normal condition in seven weeks. I need hardly observe that perimetric inflammation, or any latent pelvic disease, is contra-indicant of the internal use of electri. *y.*

Manchester.

[1] Clinical Lectures on the Diseases of Women. 1879.

SUPPOSED CHRONIC FORM OF ANTHRAX (WOOLSORTERS' DISEASE).

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HAVING read lately some cases of disease supposed to be occasioned by wool, I think possibly the following case may be interesting.

Susan H——, widow, aged forty-six, came to the hospital on April 1st, complaining of sore hands. She said that she had been employed sewing imitation moleskin trousers (a piece of the stuff I enclose), and she informs me that, though there does not appear to be anything peculiar in this material, the women employed have to be very careful, as in the event of there being any fissure or abrasion of the skin, a nasty sore is sure to follow contact with this material. On examination I found five nodules on the left hand, two being on the side of the last joints of the interdigital surface of the middle and first fingers, one on the base of the thumb, and two on the palm of the hand, where the skin is generally hard. On the right hand there are seven such nodules, situated on the palm, thumb, and inside of the fingers. These nodules are about the size of marbles, are slightly raised, very hard, and, except one on the ball of the thumb, which is bright red, are all tinged a faint bluish red. This state of things is evidently not caused by simple friction; the parts affected are those which in sewing would come most into contact with the material, and the mischief is evidently beneath the skin. The local pain is very great; she has not slept for two nights, and there is great heat of surface. Appetite very bad; tongue white and coated; bowels open; pulse 120, very weak. She was ordered twelve grains of Dover's powder and two grains of calomel at bedtime, with a sulphate of magnesia mixture, and to poultice the hands.

April 2nd.—Slept after Dover's powder.

4th.—Has had no sleep since April 1st. One nodule on right hand and two on left commenced suppurating. Pulse 120, very weak. To take one grain and a half of quinine with sulphuric acid and salts, three times a day, and to dress the sores with the following: vaseline, one ounce; zinc ointment with carbolic acid, two ounces.

7th.—Suppuration extending, much swelling and inflammation, bowels purged, sleeps a little better, no improvement in tongue or pulse. Dose of quinine increased to two grains, three times a day.

8th.—Sleeps better; there are now seven abscesses formed or forming on right hand and eight on left hand; tongue clean; pulse 96, very irregular.

11th.—Tongue clean; pulse 96, stronger; sores on left hand are now discharging freely, two of them bled a good deal on the 9th and 10th; the large sore on the ball of the left thumb has burrowed under the skin towards the wrist; the sore is now covered by hard separated epidermis, under which there is a corrugated ulcer discharging sanious fetid matter; sleeps well now. Ordered six ounces of wine daily and to repeat quinine.

12th.—A large slough came away from largest sore.

13th.—Two more nodules on right hand have now become very painful, having increased from the size of a pea to that of a marble; pulse gone up to 120; tongue again become foul; the glands outside the elbow-joint have become hard and painful, and the lymphatics red and sore, forming red lines leading from the palm of the hand round the wrist to outside the elbow; glands in axilla tender. Ordered to continue medicine and wine, with a brisk purge of colocynth and calomel.

15th.—The two last places have suppurated and are dis-

charging freely; glands still painful. Good food; wine, sixteen ounces, in the twenty-four hours.

16th.—Glands less tender; sores better. From this time she continued to improve.

21st.—Ordered one drachm of cod-liver oil three times a day.

29th.—The hands are now nearly well, there is entire exfoliation of the inner surface and sides of the fingers affected, and also of the palms of both hands.

Remarks.—Unless this case was due to some animal poison, I do not know to what it can be attributed; there is no chemical agency that I know which could occasion so much mischief beneath the surface with so little on the surface itself. It was fortunate that the glandular system was not affected until the greater portion of the spots were better, and it was singular that two little places, almost imperceptible at first, should have increased in size and suppurated whilst the others were getting well, and these places had certainly not been in contact with anything that could have caused them since the patient had been under treatment.

Liverpool.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

EXTRACTION OF CALCULI FROM THE BLADDER PER URETHRAM, WITH THE LITHOTRITE SCOOP; REMARKS.

(Under the care of Mr. WILLIAM ROSE.)

A MAN, aged fifty-two, an omnibus driver, applied at the Out-patient Department of the hospital, complaining of symptoms of stone in the bladder. He stated that some years ago he had undergone a crushing operation at another hospital, and showed a small match-box full of small uric-acid calculi, which he had passed recently. In spite of this he expressed himself certain that there was something in his bladder which would not come away.

On introducing the sound, Mr. Rose detected a stone, and after withdrawing the sound he introduced a lithotrite scoop, seized the stone, and drew it carefully out of the bladder, along the urethra, until it arrived at the meatus. He then relaxed his hold on the stone, withdrew the lithotrite, and squeezed the stone after some difficulty through the orifice of the urethra. The stone, which was composed of uric acid, was spheroidal in shape, flattened at the poles, and measured half an inch in its longest diameter. The patient was ordered a pill containing two grains of quinine and half a grain of opium, and left the hospital complaining of no pain or inconvenience.

He returned in a week with the following account of himself:—He had passed a little blood for the first few hours after leaving, but had felt no pain along the urethra, and although able to drive his omnibus, he still complained of a sensation in the bladder similar to that which he had experienced before. Mr. Rose sounded him again, and detected another stone, which he withdrew in the blades of the lithotrite scoop as before, except that the lithotrite lost its hold on the stone at a point in the urethra just anterior to the scrotum. Extraction, however, was easily effected by the use of urethral forceps and a small scoop. The size of this stone was similar to that of the former, though if anything slightly thicker.

The patient behaved with great pluck during each sitting, narrating meanwhile the sufferings which he had previously undergone. He left the hospital at once, and returned to report himself on Friday, July the 15th. His account was most satisfactory; he had lost all pain and discomfort, and an examination failed to detect anything in the bladder.

Remarks.—Mr. Rose said that this case served to show the capacity of a normal urethra, and the possibility of withdrawing a calculus of such a size intact from the bladder without danger to the patient; and he added that it was obvious that if calculi, which cannot pass naturally, can be seized and safely withdrawn at this early stage, the suffering and ultimate risk may thus be greatly diminished. After his experience in similar cases, as well as in the successful removal of such bodies as portions of tobacco-pipe and catheters from the bladder, and the recollection of those cases published by Mr. Henry Smith, Mr. Harrison of Liverpool, and others, Mr. Rose considered that such operations were strictly in accordance with true surgical principles.

HEREFORD GENERAL INFIRMARY.

A CASE OF PROGRESSIVE PERNICIOUS ANÆMIA; CHANGES IN THE MEDULLA OSSIUM; VASCULAR HYPOPLASIA; DEATH; REMARKS.

(Under the care of Dr. SMITH.)

FOR the following interesting notes we are indebted to Mr. C. J. Devis, late house-surgeon.

T. H——, aged twenty, farm labourer, first came under observation on Sept. 23rd, 1880. Four months before, after a few days' ailing, he had an attack of epistaxis, which lasted off and on for fourteen days. The loss of blood was not continuous, nor large at a time, but occurred in small amounts each day, though sometimes one or two days passed without bleeding. He became pale and felt very weak. For three months and a half he had had no return of nose-bleeding, but had sometimes found that his gums had bled during the night.

Two months before being seen his sight began to fail, and he had attacks of palpitation and shortness of breath, with frontal headache, giddiness, and drowsiness. He continued to get weaker, was quite free from pain excepting the headache, and without cough, and had not lost flesh. Previous to the present illness he had been in good health, had lived fairly well, and had not been confined to the house. He had never had rheumatism, gout, or syphilis; and had been temperate in every respect. His family history revealed no trace of rheumatism, syphilis, struma, or tendencies to bleeding.

On admission the patient's physique was good, robust, and well formed. There was no evidence of struma, and no enlarged glands. He constantly kept his eyes half closed, avoiding the light. He walked very well. He was intelligent and cheerful. The skin and visible mucous membranes were highly anæmic, resembling those of a person rapidly bled to a severe extent. The carotid arteries pulsated violently; the gums were not spongy, but presented traces of recent bleeding. Patient complained of shortness of breath, palpitation, headache, and vertigo. The chest was well formed, movements regular and equal on both sides. The heart's apex impulse was in the sixth intercostal space, one inch and a quarter to left of nipple line. The area of visible pulsation was large. The percussion note of the chest was good all over, the hepatic area was normal, and the præcordial dulness was bounded above by a line drawn from the upper border of the third left costo-sternal articulation to the apex beat, and extended ⅞ in. to the right of the sternum. The respiratory sounds were normal, a little exaggerated over the left front. A loud systolic bruit was heard at the apex of the heart, and conducted into the axilla. At the base a systolic, rather harsh, slightly musical bruit was heard, having the point of maximum intensity at the second left interspace close to the sternum, and heard also at the sterno-clavicular articulations and over the brachio-cephalic trunks. The second cardiac sound was reduplicated. A venous bruit was heard in the neck over the jugulars. The abdomen was normal, no splenic or lymphatic enlargement. No osteal pains or tenderness. Appetite good; bowels constipated; urine pale, specific gravity 1009, without albumen. Temperature 99·4°; pulse 88, small and soft. Ophthalmoscopic examination revealed neuro-retinitis in both eyes, with numerous small hæmorrhages. The disc was a dull reddish-grey, the edges blurred, the surface striated, and the vessels completely hidden. There was no hæmorrhage on the disc-surface nor in the region of the yellow spot. The blood was pale vermilion, and watery; the red corpuscles were greatly diminished in number, and almost devoid of colour; rouleaux short and few in number. Size of individual corpuscles not less than healthy blood, except in a small proportion. The white cor-

puscles, though relatively to the red increased, were diminished in actual number; their size was small, not larger than the red corpuscles. These measurements were all made by comparison with healthy blood, precautions being taken as to the time of the day and propinquity of the preceding meal.

From the first day of observation, in spite of the free administration of iron, strychnia, and cod-liver oil, with a liberal diet, the patient grew rapidly worse. The pallor increased, assuming during the last few days of life a yellow tinge, most marked on the face, ears, and forearms; the weakness rapidly increased, so that by the end of the first week the man was unable to stand unaided. On Oct. 6th gastric irritation showed itself in anorexia, nausea, foul tongue, &c., becoming in the succeeding four days very severe—the stomach rejecting everything swallowed, thereby augmenting the prostration. On Oct. 9th nutritive enemata were administered, one every eighth hour. The fourth of these was rejected. On Oct. 11th the vomiting ceased and did not return, enabling him to partake of fluid nutriment; this he did largely, as he complained of constant thirst, which continued till within half an hour of his death.

During the last week of life he constantly complained of darting pains through the temples, attaining sometimes great severity. He was, moreover, very drowsy, and occasionally delirious. On Oct. 9th retention of urine occurred, and the catheter had to be used from that time. From Oct. 11th there was constant shivering, great sensitiveness to contact with cold bodies, and the temperature, which had varied from 99° F. to 101·2° F., gradually fell, being on the 11th 98·4° F.; on the 12th, 97·2° F.; on the 13th and 14th, 96·8° F.; and on the evening of the 14th, 95·4° F. The pulse had varied from 100 on Oct. 8th to 124 on the 12th; previous to the former date it was usually between 80 and 90, and after the 12th it again diminished in frequency. The urine was pale throughout, the average quantity during the last ten days of life being 32 oz. It was free from albumen until the 10th, when a very faint trace appeared, the microscopic examination giving negative results. The urea, estimated for the twenty-four hours, was on Oct. 6th, 13·8 grammes; on the 8th, 13·0 grammes; on the 10th, 15·5 grammes; on the 12th, 11·2 grammes.

On the morning of the 14th the respiration was shorter and more feeble, becoming during the day an evident effort, the death agony commencing at about nine o'clock in the evening. At that time his pulse was regular, 88 per minute, and, for him, good. The cardiac sounds were weaker, the bruit still audible. At 10.30, the pulse still being perceptible in the carotid and radials, the apical bruit was almost inaudible, whilst the basic bruit remained very distinct. At 11.20, five minutes before death, the radial and carotid pulses were imperceptible; the systolic sound was faintly heard at the apex, becoming rapidly inaudible. The bruit at the second interspace was distinct, continuing audible after respiration had ceased, until within the final eight or nine cardiac contractions, and these at long intervals. The several examinations of the blood made during life revealed nothing further than did the first one. The left retina presented a fresh hæmorrhage, one patch invading the margin of the disc.

Necropsy, thirty-six hours after death.—The body was well developed and fairly nourished. There was great general pallor of skin, of mucous membrane, of lips and mouth, of conjunctivæ, and of nails, the latter not being tinged with yellow, as were the face and ears. Rigor mortis was considerable, lasting until after the 17th—(i.e., three days after death). Hypostatic discolouration only represented by a small light purple patch in the right hand. No cutaneous extravasations and no œdema. Panniculus adiposus considerable—$\frac{1}{8}$ in. to $\frac{1}{4}$ in.; fat bright yellow. The muscles were well developed and of a bright colour. The abdominal viscera were normal in position; omentum small, but well provided with fat, as also the appendices epiploicæ. The hollow organs were very anæmic. The pericardium was uncovered by lung from opposite the second left interspace to the apex of the heart; its tissue opaque, containing a little fat, and its cavity about three ounces of pale straw-coloured fluid. The left pleura was obliterated by old adhesions; the right pleura contained a small quantity of yellow fluid. The heart surface was pale red, mottled all over with yellow fat. The right border was thin; the left very thick and rounded. The auricles were distended, but not projecting. The right auricle was dilated, walls thin, cavity containing a yellow clot, which passed through the auriculo-ventricular orifice. The right ventricle contained a small quantity of yellow fibrin and about half an ounce of fluid blood. The walls were attenuated and of a pale greyish colour. The left auricle was much dilated, walls thin, cavity filled with yellow fibrin of tolerably firm consistence. The left ventricle held of pale fluid blood and fibrin together about 1½ oz.; the walls were firm, $\frac{1}{8}$ to $\frac{1}{4}$ in. thick, showing slight fatty changes. The musculi papillares were large and firm. Microscopically the muscular fibre was seen to be in an early stage of fatty metamorphosis. The aorta was narrow, admitting a small index finger. The circumference at the insertion of the valves was 1⅞ in. There were no fatty changes in the arterial coats. The brachio-cephalic trunks were smaller than usual. The cardiac valves were all healthy-looking and competent. Weight of heart 16·75 oz. The left lung was smaller than normal, adherent throughout its whole surface, pale mottled with pale crimson in front, and deeper crimson to purple behind; on section there exuded a considerable quantity of sanguineous frothy fluid. The right lung was more voluminous than the left, and non-adherent; otherwise similar. The liver was normal; weight 56·5 oz. The spleen was small, 3¾ in. by 7½ in.; weight 3·45 oz. The capsule was shrunken; tissue rather tough, dark flesh-coloured. The kidneys were very pale, the pyramids scarcely differing in colour from the cortex; cortex increased $\frac{4}{10}$ to $\frac{5}{10}$ in. in width; surface of section granular; epithelium fatty; weight together 13·5 oz. The adrenals were of normal appearance. The stomach and intestines were remarkably pale; nothing noticeable about their follicles. The lymphatic glands were of natural size and consistence. The bladder was distended with pale urine. The textures of scalp, meninges, and brain-substance were all healthy, excepting for the great pallor; the substance of brain was of usual consistence; the ventricles contained half an ounce of serum in each. The retinæ were removed within twelve hours of death. They were pale pinkish grey, opaque and œdematous-looking, and literally covered with hæmorrhages varying in size from microscopical points to that of a pin's head, only one or two being any larger. In the left retina 120 of these hæmorrhagic points were counted, and this number did not represent the total, as only the posterior half of the eyeball was removed. In the right eye the hæmorrhages were still more numerous, and all punctate. The optic papilla was scarcely raised above the level of the surrounding retina, the physiological cup was very shallow, the disc was dirty grey, striated, edge becoming blended with the neighbouring tissue, that of left disc invaded by one of the larger patches of extravasation, but both surfaces were free from hæmorrhage. The vessels were not visible on the disc, but in the retina they were seen to be very pale, and their course was frequently interrupted, some parts being hidden. Medullary matter obtained from shafts of humerus and femur was dark red in colour, becoming brighter after a few minutes' exposure to the air, mottled with greyish-yellow, the red by far predominating. It was of semi-fluid consistence, with small fragments of a firmer nature in suspension. Under the microscope a large number of coloured cells were seen, having the characters of red blood-corpuscles, most of them, however, being spheroidal or cup shaped, and not bi-concave discs, contents homogeneous, some few having distinct nuclei of about half the diameter of the cells, the nuclei disappearing on addition of acetic acid. The nuclei were usually eccentric and without nucleoli. About equal in number, at a rough estimate, to the coloured cells were spheroidal colourless bodies, from half as large again to twice as large as ordinary leucocytes, having coarsely granular contents and large highly refracting nuclei with nucleoli; in some instances two or three nuclei were present in the same cell. A number of smaller cells similar in size and appearance to the leucocytes from the blood during life, and under the normal size of leucocytes, differing, however, in that their nuclei were very large and clear, their contents purely granular. There were also large myeloid cells with several highly refracting nuclei, the cells being very variable in size and shape. Numerous minute bright particles were present, resembling nuclei broken loose. There were a few compound granule corpuscles. The fat cells were not numerous and contained in several instances crystalline stellate rosettes (? cholesterine).

Remarks.—The above is a typical case of progressive pernicious anæmia, exhibiting, with one exception, all the symptoms usually seen in that condition, that exception being the absence throughout the illness of any form of

dropsy, which, according to Immerman, is to some extent a diagnostic feature between it and chlorosis, being very rarely met with in the latter malady. It differs, however, from chlorosis in its progressive and fatal character, the presence of pyrexia, its resistance to therapeutic measures, and the tendency to hæmorrhages, retinal and otherwise. The absence of splenic and lymphatic enlargements, and of osteal tenderness, with no increase of leucocytes in the blood, serve to distinguish it from leukhæmia in any one of its three forms, and the absence of enlarged spleen from pseudo-leukhæmia. On reference to the morbid anatomy of the case one is struck with certain points of resemblance between it and chlorosis on the one hand, and it and the myelogenous form of leukhæmia on the other. In the *British Medical Journal* for November 6th, 1880, I recorded a case of chlorosis in the male subject, presenting somewhat unusual cardiac phenomena, which I surmised were due to a congenitally narrow aorta with a consequent hypertrophy of the heart. On comparing the cardiac phenomena of that case with those of the present one their similarity in the two cases is obvious, and the alterations found in the heart and aorta on autopsy in the present case fully supports the diagnosis made as to the vascular changes. Thus the thickness of the left ventricle, which was 6 to 8 mm. above the average, and the weight of the heart 16·75 oz., compared with 11·5 oz., the maximum weight of the normal heart, show a large amount of hypertrophy, chiefly of the left ventricle; whilst the circumference of the aorta at the attachment of the semilunar valves being 13·5 mm. below the average, indicates the arterial hypoplasia. As far as I have been able to ascertain this is the first case of progressive anæmia in which this cardiac condition has been noted, although it is a recognised condition in certain cases of chlorosis. The pathological point of resemblance of this case to leukhæmia consists in the alterations found in the medulla of the long bones, and which have been noticed in other cases. Thus from the whole aspect of the case one might consider it as a link between the pathological condition of chlorosis and leukhæmia, or perhaps, in accordance with the views of Professor Pepper, the myelogenous form of pseudo-leukhæmia. The remarkably small size of the spleen is worthy of note, as is also the considerable and protracted rigor mortis, which is contrary to what is stated in books; and, lastly, the sudden onset of the attack, the patient being quite sure of his health not having failed in the least until a few days before the initial epistaxis.

Reviews and Notices of Books.

A Treatise on the Principles and Practice of Medicine. By AUSTIN FLINT, M.D. Fifth Edition, revised and largely rewritten. Philadelphia: Henry C. Lea's Son and Co. 1881.

THIS work has been so long and favourably known, and has obtained so high a position amongst modern treatises on medicine, that it is hardly necessary to do more than announce the publication of this fifth edition. Its distinguished author is to be congratulated upon the success of his work, and he deserves that success for the pains he has taken to render it thoroughly abreast with the progress of science. All who peruse it must be struck by the extensive research which has been undertaken in the revision of this edition, combined with much original thought. There is hardly a subject which does not receive fresh illustration and discussion, opening up new lines of inquiry which had not been thought of when the previous edition appeared. We know no better plan for those who desire to trace the progress of an art than to take such a standard work as this, and follow in its successive editions the gradually-increasing tide of new observations, the substitution of teachings that have proved to be insecure for those based on surer foundations, and the elimination of hypotheses that have not stood the test of time and advancing knowledge. In medicine there are two fields at least in which the advance has been most remarkable—viz., in diseases of the hæmatopoietic system, and of the nervous system, whilst in all departments the growth in pathological knowledge has outstripped our gains in clinical observation.

In the present edition the pathological part of the work has been revised by Dr. W. H. Welch, of Bellevue Hospital Medical College, and includes the addition of some chapters on general pathology, which are among the most concise and complete in our language. In the body of the work we notice admirable accounts of leucocythæmia, Hodgkin's disease, and pernicious anæmia, the last-named especially being complete, exact, and discriminating. Dr. Flint himself appears to lean towards the view that gastric derangement is at the root of many of these fatal cases of anæmia, and in speaking of chronic gastritis he refers to cases which ran the course of "pernicious anæmia." The articles on the nervous system have been carefully revised and extended, although for the sake of the student it might have been as well had there been some diagrams inserted in these sections. But this, like Niemeyer's work, is destitute of engravings, not even a single temperature chart or pulse tracing being found on its pages. Of course, such additions are not absolutely necessary, but there can be no doubt that they are a great help to the student in elucidadation of the text.

If, where all is of such good quality, one might single out any portions where Dr. Flint is particularly strong, it would be those dealing with diseases of the respiratory organs. His article on "Pneumonitis," as he with unconscious pedantry phrases it, is excellent; and yet we might tax him with inconsistency for keeping it where it is. For Dr. Flint is one of the great advocates—and the idea is a growing one—of the specific nature of pneumonia. He believes that "pneumonic fever" is the more appropriate name to call it, and points out that, etiologically, pathologically, and clinically, it need no more be regarded as a local disease than typhoid fever need to be looked upon as an enteritis. The lobar pulmonary exudation is only the local manifestation of a general febrile process. He advocates the antipyretic treatment of pneumonia—in the administration of quinine and cold baths,—just as in typhoid fever he is also a supporter of this method of treatment. As this question of the nature of pneumonia is one which is occupying considerable attention at present, the following quotation from the book (page 183) may be read with interest:—

"Assuming that there are grounds sufficient for adding to the list of essential fevers, *febris pneumonica*, or pneumonic fever, we may define the disease as follows. It is a fever characterised anatomically by an abundant exudation deposit in the air-vesicles of a single lobe, or of two and sometimes three lobes of the lungs, with, in general, circumscribed bronchitis and dry pleurisy. It is a fever which rapidly reaches its maximum intensity, and has a short career, the duration averaging about eleven days. It proves fatal chiefly in consequence of associated diseases, complications, or accidents, and the mode of dying is by asthenia. It is non-communicable, and depends on a cause or on causes specific in character, the nature of which is at present unknown, but having relations to season and climate. It sometimes aborts spontaneously, and it is in some instances arrested by remedies. If not arrested, it may be favourably modified, its duration abridged, and the danger to life diminished by treatment addressed, not to the pulmonary affection, but to the fever."

In his chapter on Pleurisy, Dr. Flint gives (p. 144) two cases of permanent chronic effusion, the patients regaining good health, but one would hardly speak of such cases as instances of "recovery." He does not make special mention of hæmorrhagic pleurisy, save in a remark that "a sanguinolent effusion renders probable the co-existence of phthisis,"—and it might be added—"or cancer." Instances are given of simple pneumothorax with recovery, a condition not perhaps so unusual as the meagre records

would imply. Dr. Flint believes that in a certain proportion of cases pulmonary phthisis is self-limited, no matter what treatment has been pursued; and he makes the statement that "cases in which hæmoptysis has occurred show a larger number of recoveries, and a notably greater proportion of instances of arrest and of tolerance, than cases in which hæmoptysis does not occur."

Space does not permit us to follow him through his chapters on Diseases of the Circulatory Organs and Digestive System, and with the remark that he regards waxy degeneration of the kidney to be much more frequent than the large white fatty kidney, and leaves the consideration of the clinical features of chronic Bright's disease until he has enumerated the pathological facts of each of its three distinct and different forms, we may pass to one subject near the close of the book—that of Remittent Fever. In this country it is difficult to grasp the idea of this fever as distinct from typhoid, modified by the conditions under which it is met. Hence it is with relief that we find Dr. Flint considering simple remittent fever side by side with "typho-malarial" fever, the latter being the name under which typhoid fever so modified has been disguised. But when, in spite of this approximation, he yet distinguishes between the two forms, we cannot but be struck by the difficulties of the subject, and, knowing under how many and various disguises enteric fever occurs in this country, would fain hope that a way may be found either to include all remittents under this disease, or to exclude only such cases as would fall rather under the domain of malarial and intermittent fevers. A thorough and exhaustive analysis of "remittent fever" is certainly to be desired.

We cannot conclude this notice without expressing our admiration of this volume, which is certainly one of the standard text-books on medicine, and we may safely affirm that taken altogether it exhibits a fuller and wider acquaintance with recent pathological inquiry than any similar work with which we are acquainted, whilst at the same time it shows its author to be possessed of the rare faculties of clear exposition, thoughtful discrimination, and sound judgment.

The Journal of Anatomy and Physiology. Conducted by Professors HUMPHRY, TURNER, M'KENDRICK, and CREIGHTON. Vol. XV. Part IV. July, 1881. London: Macmillan and Co.

THIS part contains the following articles:—1. The Ovary in Incipient Cystic Disease, by Vincent D. Harris and Alban Doran. 2. Anatomy of the Koala (Phascolarctos cinereus), by A. H. Young. 3. The Lymphatics of the Pancreas, by George and Frances E. Hoggan. 4. Case of Primary Cancer of the Femur, by Robert Maguire. 5. Case of Chronic Lobar Pneumonia, by Thomas Harris. 6. A Contribution to the Pathological Anatomy of Primary Lateral Sclerosis of the Pyramidal Tracts, by J. Dreschfeld. 7. The Form and Proportions of a Fœtal Indian Elephant, by Professor Turner. 8. The Femoral Artery in Apes, by J. Macdonald Brown. 9. The Brain and Nervous System: a Summary and a Review, by Robt. Garner. There are five plates. Dr. Harris and Mr. Doran, in their paper on Incipient Cystic Disease of the Ovary, arrive at the conclusion that this affection may arise from two totally different ovarian elements: on the one hand, from partial dilatation and obstruction of enlarged and thickened bloodvessels; and on the other, from changes in those Graafian follicles that undergo involution without ever having ruptured. They give a good description of the changes which in such cases replace normal involution. In regard to the lymphatics of the pancreas, George and Frances Hoggan find that one or more irregular efferent lymphatics intertwine or form a plexus around the main bloodvessels and ducts; as they pass inwards the lymphatics lie on the hilus surface of each lobule, and spread over its external or peripheral aspect, and terminate in expanded culs-de-sac in loops or in meshes. A large portion of the lymph escapes from the gland by extrinsic efferent branches, passing off at nearly right angles to the axial lymphatics, and either pass backwards along the mesentery to join the receptacular chyle or join the lymphatics, accompanying the splenic ducts. The last article, by Dr. Garner, is very interesting, and is worth studying.

The Royal London Ophthalmic Hospital Reports. Edited by JOHN TWEEDY. Vol. X. Part II. June, 1881. London: J. & A. Churchill.

THE present number of this well-edited journal contains no less than seventeen articles, amongst the more important of which are—1. The Treatment of Sympathetic Ophthalmia, by G. Critchett, in which he advocates absolute rest and the avoidance of any operation on the sympathetically affected eye till it is perfectly quiet. 2. A Summary of Cases of Ocular Palsy with Comments, by J. W. Hulke. 3. Marcus Gunn on the Continuous Electrical Current as a Therapeutic Agent in Atrophy of the Optic Nerve and in Retinitis Pigmentosa; instances of great improvement in both classes of cases are recorded. 4. W. Charnley and L. Fox, who record cases of New Formation of Bloodvessels in the Vitreous. 5. Mr. Lawson describes a Case of Primary Epithelioma of the Lower Eyelid, and one of Nystagmus. 6. Mr. Wordsworth records a remarkable case of Simultaneous Subconjunctival Dislocation of both Crystalline Lenses, caused by the kick of a horse. 7. Messrs. Fox and Brailey give a Case of Glaucoma, preceded by Optic Neuritis. 8. Mr. Snell, a Case of Cholesteatomatous Cyst of Iris. 9. Mr. Adams records some Cases of Diphtheritic Conjunctivitis and of Iritis. Mr. Burnham gives a House-surgeon's Notes on the Treatment of In-patients. Dr. Brailey gives several papers bearing on the subject of Glaucoma, and in conjunction with Dr. Hebb discusses the Phenomena of Suppurative Hyalitis and their relation to the Migration Theory. Lastly, Dr. Greenhill gives the results of a critical examination of the meaning of the words Nyctalopia and Hemeralopia, with the result that they should be applied in an opposite sense to that in common use.

A CASE OF RUPTURE OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—Mary B——, aged twenty-three, was admitted into this workhouse on the 1st inst., pregnant with her first child. She was in good health. On the afternoon of the 3rd inst. labour commenced, and proceeded satisfactorily. At five A.M. the 4th inst., the head was well down on the perineum, which was not rigid, and the bony pelvis was capacious enough. No ergot was given, nor any other drug except a dose of castor oil on the morning of the 2nd. About seven o'clock on the morning of the 4th, while moving in bed, and during a slight pain, she gave a loud shriek, and suddenly collapsed, dying almost immediately.

At a post-mortem examination there was found in the peritoneal cavity about two pints of fluid (liquor amnii coloured with blood), and on removing the uterus there was discovered a laceration of an irregular and dissecting nature, about the size of the palm of the hand, and extending through the entire wall on the left side, just above the junction of the cervix with the body. At the site of this laceration the uterus was very thin, pale, and soft; and upon examining microscopically a part of the tissue here, very decided fatty degeneration was observed. The muscular tissue at the fundus was highly developed, and was quite free from any degeneration. The other organs of the body presented no morbid appearances.

I am, Sir, yours truly,

W. M. DUNLOP, M.B.,

July 18th, 1881. Resident Medical Officer, St. Pancras Workhouse.

INTERNATIONAL MEDICAL AND SANITARY EXHIBITION.

THE International Medical and Sanitary Exhibition was formally opened on Saturday last by the President, Earl Spencer, who was ably supported by Earl Granville and Sir James Paget. Among the many claims devolving upon the distinguished statesmen named, we doubt if there is one which is the outcome of a more simple and honest endeavour to benefit their fellow men, or one which could more rightly demand their sympathy and support. Already the Exhibition is a great success; and we are much mistaken if all visitors to it are not at first greatly astonished at its magnitude and importance. Medical and sanitary science works so quietly and unobtrusively, that the display at South Kensington will act as a wholesome surprise. But it should not be forgotten that the Exhibition in its present admirable proportions, amplitude, and detail is the outcome of infinite pains and foresight, and all credit is due to the Executive Committee, and particularly to its chairman, Mr. Erichsen, for the long and patient labours of which this is the successful issue.

We have spoken of the Exhibition as wide in its range. The surgeon will not only find there instruments of the most skilled manufacture and approved design, but every appliance requisite for the care and cure of his patient—dressings, splints, beds, chairs, and tables of various kinds and uses. The physician will see, too, all the latest improvements in the materials at his command for the investigation and cure of disease. To the profession, then, the Exhibition is of the greatest importance, and a careful study of its contents will place at anyone's command powers, derived from increased practical knowledge, he could not have possessed before. The mere comparison of the ward arrangements in the several large metropolitan hospitals ought to lead to a simplification and improvement in each; ideas and plans hitherto the possession of one or a few will become generalised and diffused in a way not otherwise attainable. Acquaintance with the many new applications of physical forces, especially heat, sound, and electricity, to practical medicine, can be practically made; while the help offered to physic by modern pharmacy and dietetics can be completely studied and well appreciated. And a worthy record is here made of the position to which the highest of all the branches of medicine—preventive medicine—has arrived.

To the general public the first lesson the Exhibition promises to teach is the large range of subjects with which medicine in all its branches deals. It will reveal to them the proper aim and position of medical advisers. It will demonstrate the way in which all the sciences are pressed into the service of the preventive and healing art of medicine, and show its intimate relation with every part of daily life. Prominent attention is drawn to the fact that the care of a well-equipped physician extends not only to diet and medicaments, but to clothing, furniture, the construction of houses and all their parts, and their warming, ventilation, and cleansing. And if this be accomplished and the scope of the physician's work and his wide value be more worthily appreciated, a great step will be taken in educating the public in practical hygiene. While a pill and powder prescriber is the ideal of medical (or medicine) men, everyone is wise on the real and imaginary properties of some pet remedy. And if the wide bearing of all our surroundings upon health is properly appreciated, an intelligent study of them is sure to follow quickly, and we must not fear for the wheat of truth, although for a time it be hidden in the chaff of the false. As a direct means of instruction to the public, the value of such a display as is here and now collected is very great, and we can only hope that they will largely avail themselves of the opportunity offered.

We must also express our sense of admiration for the thoroughly intelligent and earnest way in which the lay helpers of the profession support them in their work—the mechanicians, druggists, manufacturers, &c. It should not be forgotten, and this Exhibition will help to instil the lesson, that we have a large number of most able helpers in these departments, without whom many of the late more practical advances would hardly have occurred.

That this Exhibition, although not a part of the International Medical Congress, should have been held at the time of its meeting is a most excellent arrangement. Indeed, it is not far-fetched to speak of it as the first sign of the great medical invasion now nearing this city, and its secured success is a truthful augury for the success of the Congress itself. We look for great results, too, from this connexion; opportunities will thus be given to our provincial and foreign friends of practical study that ought to be fruitful in the greatest results.

And there is one more feature in the Exhibition which lends it a grace not otherwise attainable—its association with the Parkes Museum. It is a sign of the activity of this institution, most gratifying to all its supporters, and if proof were needed of the propriety of the memorial erected to the great and honoured name of Parkes, a visit to the galleries at South Kensington would carry it home to the most cynical critic.

We append the remarks of Sir James Paget and Mr. Erichsen.

Sir JAMES PAGET said he should not have ventured to address the meeting, which was essentially a meeting for the opening of the Exhibition, but for the relation which had been mentioned as subsisting between the Exhibition and the International Medical Congress. It was, in the first instance, suggested that the organisation of such an exhibition would be a proper part of the duties of the Executive Committee of the International Medical Congress; but, for various reasons, it was decided that the work of organising an exhibition should not form part of the duties of the Congress Committee, who felt that they would have enough to do without undertaking the great amount of labour that the organisation of such an exhibition involved. What had been achieved by the Exhibition Committee was enough to prove that the Congress Committee were right in leaving the Exhibition in the hands of a separate committee, who had devoted an amount of energy to the work which would have been quite beyond the power of the Congress Committee. The results shown by the Exhibition Committee, in the number and variety of the appliances and materials exhibited, were beyond what the most sanguine promoters of the Congress could have dreamt of. It was an Exhibition of which he believed the country might well be proud, and one which would be fraught with instruction and pleasure to the distinguished foreigners who would visit it in connexion with the Congress, and who would find much in it not only to criticise and to advise upon, but to admire and learn from. The medical man had very much to be thankful for in the advance of sanitary science. It was a great assistance to him to know that owing to advances in sanitation he need not, under proper precautions, fear the spread of infection from one patient to another; that he need not fear that his skill would be thrown away owing to the foulness of a hospital drain; but that, aided by the art and science of nursing, and the recognition of sanitary laws, his patients now had everything in their favour, and that the curative means he employed would have fair play. In this country health was pre-eminently wealth, and he who did not do all he could to promote his own health forfeited his right to wealth, and was guilty of the basest want of patriotism. There was one thing quite certain and fully recognised in medicine—viz., the relation between constitutional and local disease. Nothing was more clear than that local diseases very soon affected the whole body. In the same way one unhealthy neighbourhood, one plague-spot, often infected a whole district, and one district infected another, until the whole tone of life all over the country was sensibly lowered. Knowing this, then, he wished, most cordially, success to the Exhibition. If he had one other reason why he wished it success, it was that he reverenced the memory of Edmund Parkes, and he therefore hoped that the success of the Exhibition would be such as to help in placing the Parkes Museum of Hygiene on a more permanent footing, seeing that that institution sought to perpetuate the work to which Parkes devoted the best years of his life.

Mr. ERICHSEN, F.R.S., in seconding the vote of thanks to the President, said that as Chairman of the Executive Committee of the Exhibition it gave him very great pleasure to second that vote. The Exhibition was the joint offspring, as it were, of the Parkes Museum of Hygiene and of the International Medical Congress, which was to hold its first meeting in about a fortnight from the time he was speaking. Thus the Exhibition, by some law which was unknown to natural science, had come into the world before the birth of one of its parents. It had, however, inherited the good qualities of both of them; for on one side it represented in its full integrity all the wealth of hygienic appliances to be found in the Parkes Museum, and on the other hand, everything that could minister to the relief of suffering and the cure of disease, and to promote the alleviation of deformity and infirmity as they affected man. He could truly say that it was a great Exhibition, for it was the greatest of the kind that had ever been got together. It was the natural outcome of the advance of hygienic science which had characterised modern life; for if there was one characteristic of modern life more than another it was the great attention paid, at any rate by the educated classes, to the study of the laws of hygiene. The civilised man differed from the savage, and the educated man from the uninformed man, in nothing more than in the scrupulous attention paid by them to cleanliness in all that related to the health of the body and to the surroundings of the home. The civilised and educated man was impelled by his culture to be clean, and it had become an instinct with him to be so. His knowledge told him that disease was largely preventable by the observance of cleanliness, and that if preventable and not prevented it was truly self-inflicted. Disease that was self-inflicted was not always of the major kind. Not merely typhoid and small-pox, but the lassitude, the languor, and nervous depression which were so prevalent were frequently found to have their source in faulty hygienic conditions. The law of hygiene was like the moral law. Just as an infraction of the moral law might lead to the pricking of conscience, so a breach of hygienic law led to illness. Women should be our great hygienists. It was to the mother, not to the father, that we looked for the prevention of disease among the children, and for the adoption of those hygienic measures which would lead the children to grow up in vigour and health, strength and beauty, and fitted in body and mind for the duties of after-life. He seconded the resolution with much pleasure.

HOSPITAL BED AND WARD APPLIANCES.

One of the most interesting features of the Exhibition is the collection in the Albert Hall of beds and ward appliances, gathered from the various London hospitals. Each bed is occupied by a patient in the shape of a lay figure or wax model, with arms and legs deftly done up in splints, showing the various devices resorted to in the treatment of fractures, excisions, and joint disease at these institutions. The idea of such a collection was a happy and original one, and the manner in which it has been carried out is worthy of commendation. There are in all thirty-two beds, including twelve devoted to children Four of the latter are fitted up specially for tracheotomy cases. In the present article we propose to walk round the "wards," and take a general survey of the arrangements.

Turning to the left, on entering from the conservatory, we enter *Guy's Hospital* "ward." Here are eight beds in all—three devoted to children. Standing by the side of a bed at each end of the room is a life-size wax model of a nurse in Guy's costume, which serves to complete the illusion intended, and to reproduce in all details the actual picture of a ward. Then by the bedsides are the lockers with their full equipment; a spring wire chair; a basket for surgical dressings, constructed in two portions, the upper containing lint, bandages, &c., the lower strapping, oakum, and wool. All the crockery utensils in use are displayed appropriately, and specimens of case-papers, prescriptions, and diet-papers are placed in their usual positions. There is, of course, a general similarity in the different hospitals in all these arrangements, but great diversity in detail. For example, there are hardly two lockers alike; some being a single box, others composed of two or three compartments, others with shelves and drawers, and so on. We shall mention some of these presently in other hospitals; in Guy's the locker is a single cupboard. More striking still is the diversity which obtains with regard to such little details and matters of taste as the form of diet and prescription sheets, or cards, and the name of the medical officer in charge of the case. This latter is in most cases merely indicated at the head of the prescription or diet sheet, in others it figures in bold characters on a card to itself, so as to be visible from one end of the ward to the other; and at one hospital we observe a coloured disc at the bed-head, to denote the surgeon, who, we presume, does not bear the same colours on his own person. These various plans are curious and instructive, and each institution may, no doubt, learn of the other how best to modify its particular method, if modification be necessary, now that there is the opportunity of making the comparison. Again, in some hospitals the practice obtains of suspending the records of the case openly above or at the side of the bed; in others, these papers are contained in portfolios, similarly placed; whilst in others they are evidently kept away from the bed altogether. No doubt there are good reasons in favour of each of these plans, and some objections too.

The tracheotomy cot exhibited from Guy's Hospital has a tent-like covering of canvas, arranged on four vertical iron rods, the roof of the tent being pierced by a central aperture. An Allen's croup kettle is by the side of the cot; and there is an ingenious device for keeping the weight of the bed-clothes from the child. The only things which dispel the illusion of a ward are the introduction of one of the Guy's post-mortem tables, constructed also for weighing, and a collection of models of ambulances and stretchers, many of which come from Netley Museum, having been lent by the Director-General, whilst others are from the Parkes Museum. In the other part of the annex are also models of windows from the London, Middlesex, St. George's, Guy's, and St. Thomas's Hospitals—all from the Parkes Museum. That of St. George's represents the scullery window, which is so constructed that a sink exists between an outer and an inner sash, and the act of closing the latter opens the former. Mr. Nixon's device for the storage of bed-pans at University College Hospital is also reproduced here.

Passing round the eastern annex we come first on the left hand to three beds from *Charing-cross Hospital*. One of these is for a child. The others are appropriately fitted with fracture-boards, and arranged around them are the ward appliances. A tray above the bed-head holds a urine glass and test tube, and the usual cards are suspended here as in all the hospitals—some having them by the bedside over the locker, others at the head of the bed. A large box under the bed takes the place of the basket for clothes mostly to be seen. The locker consists of two compartments, the upper of which opens by a lid, the front part letting down to form a shelf, and contains the necessaries for meals; the lower part is furnished with two shelves.

Next to this is a specimen bed (untenanted) and locker from the New Marylebone Infirmary. The bed is completely equipped, and upon it is the clothing provided by the workhouse for its inmate. The locker is a double one, and is more highly finished than many.

The *Children's Hospital*, Ormond-street, sends two beds, and an infant's cot, and their neat appearance is to be commended, as well as the very realistic way in which all the accessories have been supplied—toys, dolls, feeding-bottles; even a half-empty bottle of medicine, and the cards duly filled in with names, nature of case, and prescriptions, have not been omitted. The bed from *Westminster Hospital* has a large shelf on the wall above it for holding crockery, and the locker is a small one. A different arrangement obtains at *University College Hospital*, which comes next. Here the locker consists of a box suspended from the wall, and beneath it is another box on wheels, for containing the chamber utensil—a decided improvement upon having this in the lower compartment of the same structure that contains the food, or in having it unconcealed at all. The excellent sheets for the record of temperatures and urine analysis at this hospital seem to be peculiar to it, most of the other hospitals having separate temperature charts. In Guy's this chart is engraved on the first sheet of the case papers. At *St. George's* we find a shelf above the bed-head, but no locker is shown. A small wooden bench stands by the side of each of the two beds from this institution. Here, too, we do not observe the case-papers suspended above or at the side of the bed, but there is a card which gives the patient's name, age, and address, a temperature chart, diet sheet, and prescription card. The *London Hospital* sends one bed and a locker, the latter furnished with a glass top and two compartments. The diet cards are

peculiar, each article of diet having a separate card with the name of the article printed in large type upon it. There is also a prescription paper and case paper. The *Royal Free Hospital* bed is furnished with prescription paper, temperature chart, and a diet card on which all the articles of ordinary diet are printed with the quantities that may be given. The locker consists of a box with drawers and a cupboard. *King's College Hospital* has two beds, one of which is for a child, and is enclosed within a steam tent for a tracheotomy case. The tent occupies about twice the area of the bed, and is constructed in two portions, so that it can be readily removed. The red flannel which covers it might well be replaced by the canvas adopted in other hospitals. The urine glasses stand above the head of the bed. The diet card is much the same as that at the Royal Free Hospital. *St. Mary's Hospital* sends two beds, one for tracheotomy cases, much the same as at Guy's Hospital. A portfolio suspended on each locker contains the case papers. The *Middlesex Hospital* has one bed, and two kinds of lockers, that in general use being a simple box, the other being of double construction, and used in the new wards. The case papers are suspended on a board above the bed, except in the new form of locker which is arranged to hold them; there are separate cards for diet and prescriptions. From the same hospital is shown a rather formidable but useful structure—viz., an apparatus for lifting a heavy patient from the bed and lowering him into a bath at the bedside. It consists of a gallows' frame on wheels, wide enough to stand across bed and bath, a chain pulley, which runs along a horizontal metal bar, supports a canvas stretcher, in which the patient now lies suspended over the bath. The prescription paper records the case as one of typhoid fever, and directs the bath to be given when the temperature reaches 103°. *St. Bartholomew's Hospital* sends three beds, two being for children. One of these is a tent-bed, fitted up like that at St. Mary's, and furnished with a croup kettle, whilst a flexible tracheotomy tube lies by the side. From *St. Thomas's Hospital* there are two beds, one for a child, and the general arrangement is much as at other hospitals. It should be added that every hospital sends the ward-appliances in daily use, which it is needless to particularise; some have been contented, apparently, with a selection of these appurtenances, others have sent almost every article that is employed. Enough, however, has been said to show that the collection is of great interest.

SURGICAL INSTRUMENTS AND APPARATUS.

[FIRST NOTICE.]

This department is well represented in the Exhibition, and we may say generally that all the cases are filled with instruments of excellent workmanship; every exhibitor has various improvements upon well-known forms to show, some of which are of considerable merit. It is impossible to visit this section without receiving an irresistible conviction that the progress in the art of the surgical mechanician has made in recent years, and is making now, very great advances, with results excellent alike for surgeons and their patients. We will here draw attention to the instruments that appeared to us specially noteworthy in the different cabinets.

Messrs. Ferguson and Co. have on exhibition an improved portable fracture cradle, made upon the model of Sir James Paget's, but with the uprights joined to the base by a hinge, so that they can be fixed at any angle, and when not in use depressed and the whole cradle flattened and made very easy of transport; this is a really useful improvement; it could be easily adapted to Salter's swing cradle. They have also a rectum dilator with four blades, which is skilfully made; a curved tongue forceps with fenestrations, which is a useful modification of the ordinary straight forceps, as the hand is well away from the mouth; several forceps, with lever movement in place of the hinge, adapted for the ear, pharynx, œsophagus, urethra, &c. It is noteworthy that the forceps for removal of foreign bodies from the œsophagus opens in the antero-posterior direction, which is the right way, as foreign bodies usually lie transversely; this has been one of the causes of failure in the older patterns of forceps, which have usually been made to open transversely; a good form of throat forceps, by the same makers, has a revolving end to open and grasp in any direction. Their new tonsillotome, which is a pair of blunt-ended, concentrically curved scissors, is likely to be useful for the removal of very long or irregular tonsils, which cannot be easily removed by the common guillotines. An improvement upon the usual throat spray is obtained by adapting a tongue-depressor to the nozzle, by this means the action of the spray is more exactly limited to the throat. We also noticed Stevenson's splint for fracture of the patella, a three-bladed screw preputial dilator, a simple ingenious folding stethoscope, Bryant's vaginal speculum with solid handle, and a very compact, well-made minor surgery case.

Messrs. Weiss and Sons are large exhibitors of instruments of great excellence in workmanship. To their carbolic acid sprays they have fitted a new lamp with four or six separate wicks, giving greater heat, with a reflecting plate below to protect the reservoir of spirit from heat; the base of the spray is also converted into a reservoir for the medicated lotion to be sprayed, and thus space is conserved. To a smaller portable spray a boiler is adapted, which swings in the handle; when nearly empty it rises a little, and in so doing liberates a spring cap, which at once covers over and extinguishes the lamp, and so preserves the boiler from overheating and injury. A lithoclast, made for Sir H. Thompson, is a very powerful instrument, but less formidable and bulky than the present French one. Wells's tumour forceps and Keith's clamp for use of cautery, with parallel action, are both good instruments, as is also a copper cautery, which is set in a ventilated handle which does not get hot, and the copper is free from the scaling that always occurs with iron. A galvanic cautery exhibited is also very completely fitted up. In addition to several excellently fitted cases of eye instruments, minor and major operating cases, is a very compact portable amputating case containing two knives, 6 in. and 10 in. in the blade, and all requisites, in a case 11 in. by 4 in. by 1½ in. We also specially noticed a tracheotomy tube, with a modified Jeffries' respirator adapted to it to warm the inspired air; a very good horseshoe tongue depressor (also exhibited by Mayer and Meltzer); an unusually long, narrow exploring knife, made for Mr. Holden; a simple and useful needle holder, in which the needle can be held on either side and at any angle; a novel wire snare, with movable rigid supports for slipping the wire noose over a growth; some good écraseurs, particularly a twin screw chain écraseur, in which the screw action is combined with the double action of the old chain écraseur; a solid wire endless screw écraseur; Heywood Smith's écraseur, modified to carry a chain, wire or wire rope, with a new clamp for the wire rope. Messrs. Weiss show all kinds of syringes fitted with vulcanite pistons, which have a smooth uniform action, do not shrink, and are non-absorbent, and durable. Among their other exhibits are some pure rubber bandages of fine quality, a leather lacing knee-cap, with an elastic rubber front, which has some advantages, and B. Hicks's bed lift, which has the advantage of great simplicity, cheapness, ease of working, and efficiency.

Messrs. Mayer and Meltzer show a patent clinical thermometer of an entirely novel design. It is made of metal, in shape like a watch, with a watch face protected by a watch-glass. The temperature is registered by a fine watch hand. The advantages claimed over the present clinical thermometer are its durability, the simple glass face being the only fragile part of it, its more speedy action, and the fact that it is self-adjusting. It is a very ingenious and valuable contrivance. A new patent universal truss with self-adjusting pads, in which the spring and covering of the pad are alike made of coraline, which is light, very hard, durable, and elastic, is an application of a new material to surgical appliances. Pessaries are made of coraline by this and other firms. Their perforated leather splints and spinal supports are lighter and cooler than those made of solid leather, and yet have all the requisite rigidity. The new improved spray with a self-filling boiler is a good apparatus. A small actual cautery battery, measuring only 9 in. by 6 in. by 4 in., is a model of compactness. The tracheotomy tubes shown by this firm are all made to a gauge in four sizes, an improvement which will be much appreciated by all; parts of tubes not fellows, but of the same number, fit with the greatest ease and accuracy. A spring ear speculum, and a nasal speculum with reversible shield and fenestrum for application of actual cautery, &c., are useful instruments. A revolving throat mirror for rhinoscopy, a lateral tongue depressor, oval œsophageal bougies, the œsophagoscope, a revolving suture needle, a new wire nipper with greatly increased power, knives with revolving

handles to fix the blades. Kilner's dynamometer, which is an application of atmospheric pressure, and other instruments we noted as valuable. A portable army surgeon's case is extremely well got up, the case is of leather, light and durable. A combination of Otis's lithotrite with Teevan's catch is shown; this catch is undoubtedly a good one. An articulated skeleton, in which the cartilages and ligaments are preserved supple, is also among the exhibits of this firm; it would be useful to demonstrate the movements of the various joints; a pelvis prepared in the same way, and mounted on a pedestal with a universal joint, is good for obstetric demonstrations.

Messrs. Krohne and Sesemann have some very interesting apparatus. Among them we would direct attention to Hughes' audiometer for testing and registering exactly the acuteness of hearing; Leiter's endoscopic instruments for examining the stomach, bladder, and urethra; Leiter's glass irrigator, a simple glass contrivance for washing wounds, injecting into the stomach, or bladder, &c.; Leiter's pliable metal temperature regulators, consisting of coils of lead tubing, which can be moulded on to any part of the body, and cold or hot water circulated through them, an apparatus of very wide utility and considerable practical vale. A Thomas's hip splint, made of aluminium, combines extreme lightness with sufficient rigidity and malleability, and, particularly in cases free from sinuses, will be of great advantage; in its use special care must be taken to avoid contact of discharges and reagents, as the metal is very readily acted upon. Sharp lancet-headed ivory points obviate the need for and slight risk attending the use of the common lancet in vaccinating. Other modern appliances are Allingham's clamp for piles, which so effectually crushes the pedicle that the pile can be removed at once without hæmorrhage; Harrison's stricture dilator on Holt's model, but made for effecting gradual dilatation; Thornton's T-shaped clamp forceps; Bryant's female urethra dilators; a self-retaining nose speculum; Bryant's double hip-splint; McEwen's splint for the lower limb. In addition, this firm exhibits a large selection of the various materials used in antiseptic dressings, gauzes, protectives, wools, tow, tampons, plaster, &c., which are of general excellence; the absorbent wool is an excellent preparation of fine quality, and thoroughly absorbent.

Messrs. Salt and Son are well known for their miniature instruments, and the specimens shown, all of which are in ornamental aluminium cases, are examples of clever design and excellent workmanship. The thermograph, fully described in THE LANCET of July 16th, is shown, and even if absolute accuracy be not attained by it, the record of the daily temperature is relatively accurate, and will be of considerable service in rendering more perfect our knowledge of the body temperature in physiological and pathological conditions. Dudgeon's sphygmograph is so cheap, small, simply and quickly worked, that it ought to make sphygmographic observations more general. A miniature urine test case, in which all the reagents are in hermetically sealed capsules, and a miniature aspirator of beautiful finish, are well worthy of commendation.

Messrs. Matthews Bros. exhibit a new steam spray, in which one tap is done away with, and the spray turned on by simply turning the nozzle, which moves in a universal joint; the base is a hollow metal reservoir, divided into an anterior part for the carbolic lotion, and a posterior part for water, which can be pumped from it into the boiler direct. We also noticed as novel or useful improvements of well-known instruments a hypodermic syringe, with a solid gold lancet-shaped point; a sharp-pointed gouge; a trephine, with a new and improved mode of fixing it in the handle; a good bullet forceps, the two blades of which are locked, and on their reverse ends are hollowed into two different-sized scoops; a small-ended artery forceps, Bell's catch ring, pile forceps, and Smith's cutting cautery for use with his clamp; a tracheotomy tube, in which the usual shield is replaced by a heart-shaped loop of wire, which answers all practical purposes, allows freer movement, and is safer and cleaner. Mr. Lister's lead suture buttons are shown, coated with rubber, and with two small leaden projections, to which the wire can be very readily fixed.

Messrs. Arnold and Son show a throat spray with a flexible delivery tube, which can be bent to any position without affecting the force of the spray; it is likely to prove a really serviceable improvement. Their glass vaginal and rectal specula are covered with canvas and gum, and by this means, if the glass be broken during use, the fragments will still adhere to this covering, and can be readily removed without risk of injury; similar specula are also exhibited by Maw, Son, and Thompson. Hensley's exploring aspirator, Mallam's instantaneous vaccinator, Emmet's curved scissors for vesico-vaginal fistula, which will really cut, a very compact minor surgery bag, and several cases of instruments for minor and major operations, autopsies, &c., are worthy of attention.

Messrs. Millikin and Down make for Dr. Hall White a dilating tracheotome, by the side of the knife of which is a broad blunt and flat kind of probe, which can be readily expanded aside from the knife and so assist in the introduction of the tube. In addition to Golding Bird's trachea dialator, they show a new flexible silver wire trachea tube of Mr. Howse's, consisting of a double spiral wire; it is very flexible, durable, and non-collapsible. In their well fitted up pocket cases we noticed winged torsion forceps, having additional security of hold, dressing forceps serrated to the joint, a grooved trocar, a useful scraper and tongue depressor, &c., combined, a tenotome with round shank, which plugs the wound in the skin. Other instruments which arrested attention were Bryant's bent sinus scissors—a very useful tool, an ear forceps made on the principle of obstetric forceps, so that one of the slender blades can be passed beyond the foreign body which can be thus fixed while the second is being passed, and then they can be locked; a sharp scraper, especially adapted for removal of adenoid pharyngeal growths; an air douche for inflating the Eustachian tube, with elastic nozzle to fit any nostril and to direct the stream of air directly back; an inhaler for administration of ether by the nose during operations on the mouth; very flexible rectal bougies, particularly useful for strictures high up and for patients to use themselves; a circular saw for removal of plaster of Paris splints, &c., and Bryant's talipes shoe, which is very simple in construction and yet has all the required movements. This firm also exhibits a skeleton with artificial elastic webbing ligaments for demonstrating the deformities in, and mode of reduction of, dislocations; the idea is a good one, but requires to be carried out with more accurate anatomical knowledge than has been displayed in this particular case.

DRUGS, PHARMACEUTICAL PREPARATIONS, FOOD. MINERAL WATERS, ETC.

[FIRST NOTICE.]

The collection of drugs and medicinal agents shown at the International Medical and Sanitary Exhibition, at South Kensington, serves forcibly to illustrate the gigantic strides which have been made in pharmacy and therapeutics during the last few years. Almost daily new drugs are discovered and new preparations introduced, a large portion of them finding a permanent place in our materia medica. The only objection that can be made to the Exhibition is the want of originality shown by many of the large firms, who should remember that a sugar-coated pill is no longer a novelty, and that the ability to turn them out by the hundredweight is no proof of good pharmacy. Taken as a whole, we unhesitatingly assert that the collection of drugs has never been surpassed.

In the Western Gallery, which is chiefly devoted to instruments, will be found a large and interesting collection of drugs and medical appliances, exhibited by *Messrs. Savory and Moore*, of New Bond-street. Their gelatine lamels and hypodermic discs are especially worthy of mention. The lamels consist of thin, pliable and, in some cases, transparent sheets of uniform thickness, subdivided into squares, each square containing a definite quantity of the medicine with which the sheet is impregnated. They have little or no taste, and are readily taken by children and others who dislike nauseous medicines. They have also the advantage of being portable, and occupy but little space. There are two kinds of discs—one for ophthalmic purposes and the other for hypodermic use. The dose of hydrochlorate of pilocarpine, a twelfth of a grain, recommended for subcutaneous injection, strikes us as being too small, it being frequently necessary to give from a third to half a grain to induce the full physiological action of the drug. The apomorphia discs, each containing a tenth of a grain, should prove useful as an emetic in cases of poisoning, and apomorphia might with advantage be added to the list of gelatine

lamels. Curare, we see, is recommended in tetanus, but although one or two successful cases have been reported, it should be remembered that on physiological grounds it is not indicated, and that in all probability better results would be obtained from physostigma. The collection of tinctures is excellent, and contains many—such as hydrastis, actæa racemosa, cocculus indicus, thuja, bryony, and colocynth—which will ultimately find a place in the Pharmacopœia. Datura tatula in cigars and cigarettes, and for smoking in a pipe, is a well-known specialty of this firm. Datura tatula resembles the officinal plant datura stramonium so closely that it would be interesting if Messrs. Savory and Moore would provide specimens of the fresh plants, illustrating the essential points of difference. Their collection of medicine chests is admirable, those designed for the army and for the Khedive of Egypt being especially noticeable. The Parkes chemical cabinet, for analysis of air, water, &c., is a good example of intelligent workmanship.

Messrs. Burroughs, Wellcome, and Co. exhibit a collection of drugs and apparatus remarkable both for originality and utility. They are the European agents for the capsuled pills of Messrs. McKeeson and Robbins, of New York. These pills are oval in shape and are covered with a beautiful thin transparent coating of gelatine. The objection to most coated pills is that the covering is insoluble, but that it does not apply to the capsuled pills is shown by a very simple experiment. If one of the bi-sulphate of squills be taken in the mouth the bitter taste is perceived in less than half a minute, showing that the covering has dissolved. On breaking open the phosphorus pills the odour of the drug is very perceptible, and in a darkened room fumes are distinctly seen. Messrs. McKeeson and Robbins' preparations are invaluable. We would especially call attention to the pills of monobromide of camphor, digitaline, ergotin, hydrastin, and iodoform. The dose of sulphide of calcium, however, has been made unnecessarily large, and it would have been better to have kept to the quantity originally recommended by Dr. Ringer. The Burroughs' beef and iron wine is said to contain in each tablespoonful the nutritive value of one ounce of beef and a grain of iron dissolved in wine. It has of late been greatly improved in flavour, and is in every way an excellent preparation. Children, we find, take it readily and like it, and in many cases of scrofula and rickets we have given it with the most gratifying results. Wyeth's compressed tablets are a great improvement on the hard unpalatable lozenges which have so long done duty in the Pharmacopœia. The chlorate of potash and the chlorate of potash and borax will be found useful in throat affections, whilst the bi-carbonate of potash and bi-carbonate of soda tablets prove efficacious in dyspepsia. The "soda mint," or "neutralising" tablets, will earn the gratitude of many a flatulent dyspeptic. Wyeth's dialysed iron is, of its kind, a perfect preparation, and is often taken without difficulty when other forms are not well borne. It is the best antidote in cases of acute poisoning by arsenic. The Burroughs' hazeline is as good as it is attractive. It is a clear pellucid fluid, has a fragrant odour and a cooling taste. It is a concentrated liquid extract of the hamamelis virginica, or American witch hazel, and has a high reputation in the United States, where it is used in the treatment of eczema, ulcers, burns, and similar affections. It has undoubtedly the power of arresting many forms of hæmorrhage, and is almost a specific in bleeding piles. The dose is half a teaspoonful in a little water three or four times a day, and it may also be used locally. It is deserving of a much more extensive trial than it has yet received. Fellowes' syrup of the hypophosphites is said to contain hypophosphite of iron, quinine, strychnia, lime, potash, and magnesia. It may be given with confidence in cases of nervous debility, especially when arising from sexual excesses. Bishop's granular effervescing citrate of caffeine is a good mode of administering this valuable drug. The Florida water of Messrs. Murray and Lanman can hardly be considered a pharmaceutic preparation, but used in the form of spray it will be found most useful in the sick chamber. Kepler's extract of malt, also exhibited by Messrs. Burroughs and Wellcome, is favourably known to the profession, and is as distinct an advance in therapeutics as was the introduction of cod-liver oil. It is one of our best remedies for atonic dyspepsia, and is undoubtedly useful in consumption and other wasting diseases. The novelties introduced by this firm are so numerous, and of such value, that it is difficult to do them justice within the limits of a short notice. Their most recent productions are tablets containing morphia, or atropia, for hypodermic use.

Messrs. Corbyn, Stacey, and Co. show their medicated bougies, pessaries, and suppositories. The bougies can be made containing belladonna, opium, morphia, nitrate of silver, and sulphate of copper. Their price is sufficiently low to admit of their being used in hospital practice. They also exhibit several remedies which have been found useful in the treatment of gonorrhœa, including the sandalwood oil capsules and oleum erigerontis canadensis, the latter usually effecting a cure in from two to ten days. A useful drug is the psoralea corylifolia, a native of India, which is said to promote the growth of the hair even in those who have become completely bald. The gynocardic acid pills for leprosy, psoriasis, and other skin diseases are new. Chaulmoogra oil itself has of late been highly recommended in the treatment of phthisis. One of the most notable specimens in the collection is the muscarine prepared by Messrs. Corbyn and Co. from the fly agaric. There is always a demand for this drug for physiological purposes, and it is often difficult to obtain. We would suggest that, with the view of obtaining an absolutely reliable article, each preparation should be submitted for examination to some trustworthy authority, in order that its activity might be determined. There is one point in the prospectus issued by this firm to which we must take exception, and that is the dose recommended of the nitro-glycerine solution. From one to five minims is quite enough in the vast majority of cases, and in many instances a twenty minim dose has produced startling if not dangerous symptoms.

Messrs. Allen and Hanburys have a goodly collection of jujubes and the medicated throat lozenges, which are an improvement on the ordinary hard, rough, angular lozenge. They also show specimens of chrisma, a new basis for ointments, of their perfected cod-liver oil, which is as nearly tasteless as cod-liver oil can be, and of fluid extract of tonga, which still maintains its reputation in the treatment of neuralgia. This firm has recently undertaken the agency of Page's vaporiser, a neat little apparatus intended for the diffusion of the fumes of cresolene through the air of the sick chamber in cases of asthma, bronchial catarrh, and whooping-cough. We have tried it, on a limited scale it is true, and are inclined to think well of its capabilities. The weak point of the apparatus is the lamp, which might be improved.

SANITARY SECTION.

[FIRST NOTICE.]

This department of the Exhibition must be pronounced a complete success. We doubt if such an extensive collection of sanitary appliances has ever before been brought together or exhibited under such favourable circumstances. It would be impossible in a single notice to do justice to all the exhibits which came under our observation—indeed, our space would barely allow of their mere enumeration. We therefore purpose on the present occasion to describe some of the chief objects of interest that attracted our attention at the time of our first visit, with the intention of completing at the earliest opportunity the description of the entire collection.

The Eastern quadrant is chiefly occupied by appliances for ventilating, lighting, and warming (Section XIV.). In nearly all the latter the chief object that has been aimed at is the consumption of smoke and the saving of fuel. Thus Messrs. Rosser and Russell exhibit an elegant and artistically designed Reversible Basket Stove. This is a circular iron basket fitted with two doors top and bottom. The fuel is put in at the top of the basket; the lid is then closed and the basket turned upside down; the fresh coal then burns slowly downwards, and the smoke in passing through the fire is entirely consumed. This stove, it is said, will burn for ten hours without attention. The same firm exhibit a patent system of glazing without putty, adopted by the Royal Horticultural Society. Messrs. Musgrave and Co., of Belfast, draw attention to the Ulster Smokeless Stove Grate, which is very similar in appearance to an ordinary well-designed register stove, only that, in addition, it is provided with a chamber for holding fresh fuel, which replenishes the fire as it burns away; the smoke, which in ordinary grates escapes into the chimney, is in this grate retained by intercepting traps, and made to pass through the burning fuel, and is thus consumed, adding immensely to the heating power and brilliancy of the fire. "The Wonderful Grate" is exhibited by Messrs. Archibald Smith and Stevens; its chief features are that it is self-feeding, and that the intensity of

the fire can be regulated at pleasure, and that it burns twenty-four hours without attention at an average cost for fuel of fourpence. It also has the advantage of being adapted for the introduction of fresh warm air into the room. From the fact that the intensity of this fire can be easily regulated, this grate seems likely to be especially useful for bedrooms that would probably be set aside for the use of the sick, in case of illness occurring among members of the family. Messrs. Deane and Co. exhibit a patent register grate for burning anthracite coal as easily as ordinary coal. Its construction is very simple. The space on each side of the fire, usually filled up with brickwork, is occupied by side-flues which communicate with the bottom of the stove. When the register door is closed a strong draught is created, and the products of combustion are conveyed down side-flues and directly under the fire, the greater part being again drawn through the fire and consumed, and the remainder carried into the chimney through an opening below the fire. When the fire is well alight the register door may be opened and the anthracite then burnt as in an ordinary grate. From the powerful up-draught, occasioned by the arrangement described above, this stove might be advantageously employed as a cure for a smoky chimney. Messrs. Waller exhibit a patent fire-contracting stove in which by simply inserting the poker into a small notch at the side of the grate an iron cheek can be drawn out or pushed back, thus diminishing or increasing the quantity of fire at pleasure without trouble or delay. The "Crown Jewel" anthracite coal stove is deserving of particular attention, though we cannot on the present occasion do more than repeat the commendation we expressed after seeing it in action at the late Food Exhibition at the Agricultural Hall (THE LANCET, Nov. 13th, 1880). The Wilson Engineering Company exhibit a portable close fire smoke-consuming range, the principle of which may be thus briefly described. An air-valve regulates the fire, so that nearly all the heat is expended in the range, and but little passes up the chimney. The combustion of the smoke and the noxious gases is effected by means of intensely superheated air. The cold air, in the first place, being admitted through a ventilator in the fire door, passes through flanged chambers, of which the fire-box itself forms in every case one side. In this passage the air, now thoroughly heated, meets the smoke and gases, and at the upper portion they are partially arrested by means of a "baffle-plate." At this point the heated air and smoke mingle, inducing almost perfect combustion of the latter. After seeing this stove in action we are prepared to speak of it in high terms of commendation. Mr. T. J. Constantine also exhibits his "Treasure" Cooking Ranges, which have already received favourable notice. An improvement, however, has recently been introduced by which the smoke generated by the fuel is to a very great extent consumed. The fire-door or furnace is divided into sections, so that the air has to take a circuitous course round the chambers, and by the time it reaches the fire the hot air arising therefrom consumes the smoke. The fire basket has also a similar number of air tubes surrounding it. An arrangement of gills exists on the sides and bottoms of the ovens which assists in conducting the heat to them. The arrangement of the ash-pan is also novel, being in two parts, an upper one, the receiver, for the ashes, and a lower one for the dust; this allows the ashes to be reburnt. We would particularly draw the attention of our readers to the ingenious construction of the stove. The "Radiator" Cooking Range is also deserving of commendation. Messrs. Potter and Son exhibit the Thermhydric Hot-water Open Fire-grate. In this grate the air cannot be burned or be heated above the temperature of boiling water, and the water contained in the vase being evaporated, the air of the room is kept moist. These grates have been successfully introduced in the wards of many of the metropolitan sick asylums, and the new infirmary of St. Marylebone has been entirely fitted with them. Among the many grates and coal economisers suitable for ordinary sitting rooms, few struck us more than the "Wharncliffe," exhibited by Messrs. Steel and Garland. This grate, whilst extremely simple in construction, is efficient in action. It requires no fixing, and is complete in itself. Thorough and efficient ventilation is secured by pure cold outer air being passed through the hot air chamber. From its form—the entire stove projecting forwards—all the heat produced is thrown into the room. The design, moreover, is elegant and artistic.

The important question of ventilation has received its full share of attention among exhibitors. We would draw attention to the Ellison collection of patent air-diffusers, ventilating valves, conical perforated bricks and air-grates, all constructed with conical-shaped openings, tapering larger to the inside, by which means the in-coming current of air is radiated and diffused, so that draught is considerably reduced. The Imperial Ventilating Bracket, in combination with a patent air-cleansing water-box, exhibited by the Sanitary Engineering and Ventilation Company, will be found a convenient and ornamental method of introducing air into a room where decorative requirements have to be taken into consideration. The stands of Messrs. Benham and Sons exhibit their Anglo-German Stove; their Ventilating Globe Gas pendant; a Siemens' Gas-fire to burn anthracite coal, with which it gives a nice clear fire, the gas lights the coal, and so does away with the old trouble of sticks and paper; useful for studies, consulting rooms, &c., where a fire is often required to be lighted or relighted at a moment's notice. Messrs. Benham also exhibit a hospital slop sink, with which we were pleased, and which seems to supply a want that is much felt. Messrs. Benham's steam disinfecting oven struck us as being a very useful contrivance, the employment of damp heat instead of dry heat being in many cases a distinct advantage. No. 410; Robert Boyle and Sons, No. 258; Mr. Paton Buchan, No. 261; are replete with contrivances and appliances for ventilation under every possible condition likely to occur. Messrs. Banner Bros. and Co. exhibit models demonstrating their now well-known system of sanitation as first applied at Guy's Hospital in 1876, since when it has been adapted by several other hospitals in the metropolis. By their system, which consists in causing a constant current of fresh air to be continuously passing through the drain, no traps are required beneath the W.C.s. They also exhibit numerous ventilators for sewers, railway carriages, &c., and also a useful and improved W.C. which is attracting considerable attention. The various methods of ventilating drains, sewers, and watercloseets are well illustrated. Claughton's oval and round stench traps appear to us to demand a word of special commendation. The patent Edinburgh air-chambered sewer trap has been highly recommended by many eminent authorities, and we fully endorse the opinions expressed by them. "Weaver's Ventilating Sewer Trap," manufactured by Messrs. Stiff and Sons of Lambeth, appeared to us to meet all the requirements of a good house drain trap. It is compact and simple in construction, easily fitted, and, perhaps, what to many householders is an important consideration, it is decidedly cheap. Messrs. Maguire and Sons, of Dublin, exhibit a specimen of their safety joint drain, supported on cradles. Each alternate length of drain pipe is furnished with an inspection hole with a movable cover, which is finally cemented down; this affords an easy means of smoothing perfectly the interior of two joints, right and left, and giving facility for the careful inspection of every joint in the drain after it has been laid and finished. We must express ourselves as much pleased with the admirable piece of workmanship submitted for our inspection. The subject of the waste of water from cisterns and for flushing closets, urinals, &c., has received considerable attention. Purnell's Syphon Waste Preventer has the merit of being extremely simple in action. It may be thus described. The moment the valve is opened, by pulling the cord, the water flows through the connexion into the discharge-pipe, causing a powerful vacuum; the water rushing to fill up the vacuum starts the syphon. When once the syphon is set in action, the water will continue running until the whole contents of the cistern have been discharged. Our readers should see the simple and ingenious contrivance in action, when they will best judge of its merits. The Frictionless-balanced Supply Valve, manufactured by Messrs. Tonks, deserves special notice; the substitution of glass for copper and zinc reduces the cost and enables the ball to be made of a larger size than is the case with ordinary metal ball valves. Messrs. Braithwaite and Co.'s Patent Syphon Waste Preventer is also an ingenious arrangement. The filter manufacturers are well represented, and we noticed several novel and elegant designs. One of the most interesting exhibits in the department is Maignen's "Filtre Rapide," which promises to prove of nearly equal value as a filter for water as it has already proved for the clarification of all kinds of liquids. It is based on the now well-ascertained fact that a thin filtering bed of fine material is more efficacious than a thick one of coarse material. For many scientific purposes a better filter could not be desired.

THE LANCET.

LONDON: SATURDAY, JULY 23, 1881.

As we briefly announced last week, Mr. ERASMUS WILSON has been elected President of the Royal College of Surgeons of England. The *reason* of the thing is not obvious. Whether it was that the Council could not resist the temptation to assert its autonomy, or that it was, at the last moment, unable to shake off the trammels of old usage, or that a majority of its members did really believe Mr. WILSON to be the fittest representative as well of the College as of English Surgery during the International Medical Congress, we do not care too closely to inquire. Any one of these surmises is sufficiently perplexing, and in this instance, perhaps, all three are true. It is enough that, notwithstanding a strongly adverse opinion of a large and influential section of the Fellows outside the Council, and in spite of the undisguised disapprobation of some of the most eminent of the surgeons within the Council, no less than fifteen of the twenty-three members present at the meeting last week voted for Mr. WILSON'S election to the presidential chair. Two members, including the late President, abstained from voting; and of the remaining six, five voted for the election of Mr. SPENCER WELLS, and one for the re-election of Mr. ERICHSEN.

It is difficult to get rid of the uncomfortable suspicion that those who did vote for Mr. WILSON'S election were influenced by no other consideration than that of personal predilection, and guided by no other principle of selection than that which determines the appointment of a Master of a City Company. There, we believe, a course of rigid routine is blindly followed, and a member is elected when, with the lapse of time, his turn comes round. It would be well for the College if it were possible to discover any other rational or intelligible explanation of Mr. WILSON'S election.

At all times it is desirable, if the Council would preserve the College from the decay that falls upon all ancient institutions which fail to catch the spirit of a progressive age, that the President of the Royal College of Surgeons of England should be an avowed general surgeon of acknowledged reputation; but this year, with the International Medical Congress close upon us, it was especially incumbent upon the members of the Council to take care to elect to the Presidential chair a worthy successor to BLIZARD and to CLINE, to ABERNETHY and to the COOPERS, to CARLISLE and to KEATE, to GUTHRIE and to LAWRENCE, to BRODIE and to TRAVERS, to STANLEY and to GREEN, to ARNOTT and to HAWKINS, to SOUTH, to HILTON, and to FERGUSSON. This, however, they have signally failed to do. Mr. ERASMUS WILSON is not, in the ordinary sense of the term, an English surgeon. To the profession he has for many years been known, almost exclusively, as a dermatologist. But this does not necessarily imply special fitness for the important office of President of the Royal College of Surgeons. The first qualification should be, as we have said, eminence as a general surgeon, and this, we repeat, Mr. ERASMUS WILSON does not possess. As an author and practitioner he takes rank as a dermatologist, his principal competitors and rivals having for many years been *physicians*. Even as regards the Royal College of Surgeons it may be said that Mr. WILSON'S associations and relationships have, for the most part, been connected with dermatology. For nine years—from 1869—he occupied the Chair of Dermatology, which he himself had founded in the College, and to the abolition of which he was a consenting party when he ceased to lecture.

It would be mere prudery to pretend to conceal these personal considerations, though we have no desire to press them too far. It is, nevertheless necessary, in the interests of medical education and politics, that the appointment of the President of the Royal College of Surgeons should be fully, freely, and candidly criticised. In proportion as the Council of the College seeks to extend its function as an examining body, influencing and controlling medical education, it renders itself more and more amenable to public criticism. There is, we are aware, a disposition on the part of some of the older members of the Council to affect a disregard for such criticism, and occasionally to resent the semblance of interference or dictation from outside. The time has, however, gone by for any serious trial of strength between the members of the Council and consolidated professional opinion. The members of the Council are the representatives of the Fellows by whose voice and suffrage they obtain their seats in the Council, and do not possess any essential rights or autocratic powers. So long as they perform the reasonable behests of the majority of the Fellows, matters may go on undisturbed. If, however, the members of the Council fail to show a proper respect for the deliberate opinion of those whom they represent, it will not be surprising if the Fellows precipitate the demand for a new charter, whereby they shall acquire not only the coveted privilege of voting by proxy at the annual elections, but take into their own hands the power of electing annually or biennially the President of the College. Any backward straying to the old ways of opinionated and obstructive officialism would, we are convinced, be speedily followed by reconstitution of the Council, and by measures of effectual control upon the vagaries of some of its complacent members.

THE Local Government Board has published a further supplement to its Ninth Annual Report, containing reports and papers submitted by the Medical Officer of the Board (Dr. BUCHANAN) on the recent progress of Levantine Plague and on Quarantine in the Red Sea. These subjects were omitted from the annual report of the Medical Officer issued from the Parliamentary Press a short time ago, and reserved for separate publication, although it was stated in that report that they had made "considerable demands" upon the Medical Department during 1879.

The present report is devoted to two papers, both from the pen of Mr. NETTEN RADCLIFFE, one being a memorandum on the progress of Levantine Plague in 1878-79, including the reappearance of the disease in Europe; the other, a Memorandum on Quarantine in the Red Sea, and the regulation of the pilgrimage to Mecca. These memo-

randa are preceded by some brief prefatory observations by the Medical Officer.

The Memorandum on Plague is in continuation of previous well-known memoranda on the same subject. It is a highly elaborated document, dealing with appearances of the disease in Persian Kurdistan, in India, and in Western China, as well as on the course of the Lower Volga in Eastern Russia, and is illustrated freely with excellent maps. Notwithstanding the large amount of valuable information relative to plague brought together in the report from each of the several countries referred to, the interest chiefly centres in the account of the outbreak of plague in the province of Astrakhan. The preparation of this account must have been a work of considerable labour and great difficulty. The materials out of which the account had to be framed were by no means complete, and not always to be depended upon; but Mr. NETTEN RADCLIFFE, properly regarding the reappearance of plague in Europe as a matter of the highest epidemiological and medical interest, has evidently spared no pains to construct a correct history of the outbreak from the extensive materials at his disposal, and while the facts were fresh in memory, and with a result for which epidemiologists at least will be grateful. As Dr. BUCHANAN observes:—"The task has been one of no little difficulty, but it is believed that the result is a trustworthy account of the main facts of the epidemic."

The account is valuable not only from a strictly epidemiological point of view, but from certain important practical lessons which are educed from it. Mr. RADCLIFFE studies the outbreak from the vantage-ground of a familiar acquaintance with previous recent outbreaks of plague. He advances good reasons for setting aside the discussions which took place at the time of the prevalence of the disease on the Lower Volga as to the importation of the infection of plague there from Persia or from Asia Minor, and comes to the important conclusion "that the outbreak of plague on the Lower Volga was, as to local conditions and as to source of origin (whatever the nature of that source might be), similar to the outbreaks in Mesopotamia and Benghazi. This conclusion, he adds, "alone of the several suggestions as to origin, covers the whole phenomena of the outbreak." And here it is proper to mention that Mr. RADCLIFFE finds important evidence in the report of the British Plague Commissioners, Mr. W. N. COLVILLE and Dr. J. F. PAYNE, bearing upon this subject. The Royal College of Physicians have suffered that report most improperly to drop out of sight, and, we have reason to believe, did not even distribute copies to the committee of members of the College appointed, when the Commissioners were named by them, to consider the subject of plague. It is pleasing to learn, on Mr. RADCLIFFE'S authority, that the report was evidently unjustly dealt with by the College, and that it has a very special value, although the College and its committee failed to discover it.

Supreme importance, in a practical sense, is to be attached to the view which the report suggests of the conditions favourable to the development of plague. This is well expressed by Dr. BUCHANAN in the following words:—"There are," he writes, "a good many indications of plague resembling typhus fever (if not, as some have contended, in its nature) in its behaviour among populations living under conditions of privation, of squalor, and overcrowding; and, just as it may be affirmed from our knowledge as to the conditions of typhus, that European populations need no longer suffer from this scourge, so it may be expected, as civilisation carries with it a knowledge of the elementary conditions for health, plague may, at least as an epidemic, be driven behind a more and more remote Asiatic and African frontier."

Not less practically important is the account given of the quarantine measures which different nations on the Continent put in operation against plague when it became known that the disease had appeared on the Lower Volga. The report gives a synoptical account of these measures, and, as Mr. NETTEN RADCLIFFE justly says, "they scarcely admit of being considered in a medical aspect." They are, in fact, a series of eccentricities of a sort that should be regarded as singularly humiliating to beings who assume to be rational. These measures, says the report, with reference to those particularly practised in Russia, were "instituted before the facts of the outbreak were clearly known; interposed an almost insuperable obstacle to the proper ascertainment of the facts; directly tended to confirm the popular notions of plague out of which panic arose; were probably, if not certainly, in their earlier application, largely (although, it must be said, unnecessarily) responsible for the great mortality of the disease; and had they been continued longer in operation than they were, by the interruption of commerce, must have led to deplorable results with regard to the sustenance of the people."

The Memorandum on Quarantine in the Red Sea deals with a subject not familiar to English people, but one which very seriously concerns our trade with India and the Far East by way of the Suez Canal. Although the paper is a formal official document, it might just as well have been headed a Memorandum on the Eccentricities of Quarantine as practised in the Red Sea. There would appear to be a combination among the nations of the Mediterranean littoral to compel the Egyptian Government, whether they like it or not, to perpetrate the uttermost absurdities of quarantine on the Suez Canal. Mr. RADCLIFFE gives a detailed and instructive account of the practices pursued in the Red Sea ports in regard to cholera and plague; but the most important portion of his Memorandum consists in an attempt to present the subject from the point of view, not of English opinion, but of the nations more immediately concerned in maintaining quarantine. In so doing he considers the subject from a point of view we have not hitherto met with, and he brings into clear light the practically insuperable difficulties in the way of the English Government dealing with this subject in any than a political sense. The style and literary workmanship of Mr. NETTEN RADCLIFFE'S Reports and Memoranda are not less admirable than their matter is useful to the profession, to the Legislature, and to the public.

THE known facts relating to internal and external heat are, of course, perfectly familiar to the profession, and they doubtless form the bases of the advice given by practitioners to their patients in seasons like the present, when the conditions of life are, to borrow a political expression, somewhat

strained. It would, however, be well if the prominent laws—or modes—of life in relation to temperature could be widely understood and intelligently acted upon. The facts to recall are briefly the following. Speaking roughly, but with practical accuracy, the human body must, to be in health, maintain a temperature not varying more than some fractions of a degree from 98° F., whatever the heat of the atmosphere may chance to be. The sources or conditional causes of internal heat are nutrition and exercise. Oxidation, of course, plays the first and essential part in heat-production, whether the heat seems to be directly due to food or work. The heat imparted to the animal body from without cannot replace the heat of vitality which is generated within, but the problem of life and comfort is to preserve a normal temperature in the organism by lowering or raising the rate of internal production as the external conditions require. The utmost we can do with regard to the external heat is to keep it off by interposing between the surface of the body and the rays of heat directed upon us such shields or clothing as may be most convenient to intercept them.

Our immediate concern is with the *internal* heat. When the external temperature is low we take measures to prevent the loss of our self-produced heat to surrounding objects; when the external temperature is high, we are chiefly intent on securing such a distribution of heat from the surfaces of our bodies by contact or radiation as will prevent the internal temperature from rising above the normal. In any case it is the *internal* to which we must give our chief attention, the external being an enemy or a friend as it affects the internal, hindering or helping us to economise heat-production when we need to minimise food or exercise, embarrassing or facilitating our endeavours to rid the organism of superfluous heat when the conditions require that we should reduce the animal temperature. Surface temperature is of secondary moment, except as it may be taken to indicate that of the underlying organs, or as it shows whether the skin is discharging its functions as the equilibrating agent—the envelope which defends the body from the temperature of its surroundings by acting as a non-conductor, or directly reduces the heat of the organism by establishing perspiration and evaporation. Experiment has shown that there are normally two periods of greatest heat in the day—namely, about 11 A.M. and 4 P.M.—and there is a period of cold in the night, which varies with the season, by gentle falls, about 2 o'clock, and is not dependent on sleep; at least if it is, the cause must be organic habit, as it occurs whether the subject be waking or sleeping. The heat produced by muscular exercise is generated, and, to a great extent, localised in the muscles in action, and only communicated to the rest of the body by transmission. Activity of the nervous system, and particularly of the brain, produces or controls the production of heat. A man may be thrown into a state of intense heat bordering on fever by passion, or he may become cold with fear or grief. These are necessary consequences of the fact that the mind, whatever that may be, acts directly on the organism through the nervous system. The heat attendant on digestion, before assimilation and nutrition can have been established, is probably due to a modification of the action of the sympathetic. It is no longer possible to speak of the non-nitrogenised elements of food as the heat-producers, and the nitrogenised as nutrients. Heat is a concomitant of the process of nutrition because oxidation doubtless constitutes a chief factor in that process. The most we can say is that the animal organism craves for fatty matters in cold weather more than in hot, and that they probably serve a prominent purpose in heat-production. These are only a few of the commonest and most familiar facts relating to heat; the enumeration will serve to recall the subject as a whole, and to give it that distinctness before the mind which the emergency of exceptional heat renders desirable.

The practical deductions from what we know about animal heat and its relations to external heat are not less obvious than the premisses from which they are derived. The problem, as we have said, is one of equalisation. Given an external temperature of 97° in the shade and 140° in the sun, it is manifest that the systemic production of internal heat ought to be reduced to a minimum. Feeding tends to produce heat, therefore not more food than is required to compensate the inevitable waste of the organism ought to be taken. By diminishing the general activity we can minimise the consumption of tissue, and thus, within certain limits, restrain the demand for nutrition and food supply. As it is, however, impossible for us to cease to live and act when the weather is warm, it only remains to economise the conversion of force into energy, and to avoid excess in the recourse to food to compensate what we suppose to be the waste and want of the system. Appetite is so much a matter of habit that it does not afford a trustworthy guide in emergencies which require that the mode of life should be governed by reason. As regards clothing; this ought to be light in weight, porous in texture, and so loose as to allow a free play of air upon the surface of the body, and to admit of unrestrained evaporation. When the atmosphere in immediate contact with the skin and air-passages is dry, a much higher temperature can be borne without inconvenience than when the atmosphere is laden with moisture. It follows that if evaporation is less rapid than perspiration we suffer discomfort by being, as it were, enveloped in an atmosphere of steam. It is mainly by evaporation the body is to be cooled. The cooling process should therefore be in direct proportion to the heating process—that is, the rate of heat-production within. There are some curious facts about perspiration which are not sufficiently recognised. For example, when the action of the skin is provoked or promoted by external conditions *alone*—that is to say, when the skin has relaxed and set its sweat-glands in action as a defensive effort aimed against the attack of heat from without—no physical mischief results from "checking perspiration" suddenly. A man may plunge from the hot chamber of a Turkish bath into cold water and he will not take cold. The "check," so to say, falls only on the skin. There was no inner or organic need for the perspiration. If, however, the perspiration is set up from within and necessitated by a heated or congested condition of the internal organs, it cannot be checked without danger of cold and possibly serious disease. This fact is important in itself, and it has a special significance as illustrating the economy of internal heat production and external heat compensation. A clear notion of the physiological facts will suggest a mode of life in tropical times by which health may be preserved and comfort secured without

extraordinary difficulty. Most of the disorders consequent on the removal of natives of a temperate climate to hot latitudes are plainly due to the failure to modify the mode or habit of life in such ways as to suit the change of residence. While we are visited by tropical heat we must accept the altered conditions of existence, and live, as nearly as may be, as the new conditions and changed climate require.

THE gentlemen who aim at covering London with Provident Dispensaries met on Saturday last at Grosvenor House. The noble proprietor, the Duke of WESTMINSTER, was only prevented taking the chair by having to attend the QUEEN. Mr. STANSFELD presided. The chairman was supported, amongst others, by Sir SYDNEY WATERLOW, Bart., M.P., Sir CHARLES TREVELYAN, Bart., Sir RUTHERFORD ALCOCK, and Sir WILFRID LAWSON, Bart., M.P. The only medical name which we recognise in the reports is that of Mr. TIMOTHY HOLMES. This group of gentlemen is well known to be committed to a war against the spirit of pauperism and dependence, and they have shown too much earnestness and taken too much trouble in this contest to be disregarded. Their object is intrinsically a good one. They would do away with all gratuitous medical help for the ordinary medical purposes of life. Excepting capital operations in surgery, they propose to supply the working man and his family with skilled medical attendance and nursing in connexion with provident dispensaries on perfectly independent terms. The dispensaries are to be entirely self-supporting and self-governed, and each must pay something to the Central Association. By means of the Association whole families may ensure themselves, it is said, against the risk of heavy bills, which it is often difficult to pay. Even where a severe surgical emergency arises, provision will be made to meet it by supplying a recommendation to a special hospital. All this on entirely self-supporting principles is not very easy to understand, apart from another feature of this great experiment. By the side of the Association is to be a Company—a veritable Joint-Stock Company,—to have a capital of £50,000 in £1 shares, out of which the dispensaries are to be bought. A sum of £2000 is to be set aside for preliminary expenses. A resolution, proposed by Sir CHARLES TREVELYAN, was passed, declaring this scheme worthy of support. It is not said how many shares are taken, but the Duke of WESTMINSTER has subscribed for 500 fully paid-up shares.

It certainly will be a most astonishing thing if the Association and the Company both succeed, if the working classes get all this advantage on commercial principles, the Company netting 5 per cent., and if the medical profession enter into the project so as to give the members a choice of medical men. Before we can give our cordial support to this scheme we should like to be informed more particularly as to the medical arrangements. We commented last week on a medical institute on a huge scale in which whole families are to be attended for 1*s.* 6*d.* a quarter, or 6*s.* a year, and two doctors are employed to do the work of twelve. At some of the meetings of the Metropolitan Provident Medical Association and its subsidiary Financial Company language has been used which seemed to imply that such cheap arrangements were to be introduced into London—arrangements by which a family is to be attended for a sum which a respectable club would give for attendance on a single member. If this is to raise the member of the dispensary, it is to degrade the profession more effectually than is done by present systems. The Association makes free use of the reputation of provident dispensaries, but these are not entirely self-supporting, and even they have not been on any large scale a success, so far as a proper payment of medical men goes. We venture to hope that the gentlemen who are promoting this great scheme will keep in view not only commercial principles, but the dignity of medical labour. They know better than most people how much medical work is now done for nothing. Let them beware lest they bring about a state of matters in which it shall be still more disparaged and done for still less. Let them take for their guide the most generous clubs, and eschew the example of those which show no sense of the value of medical services and the various tastes of the working classes and their families.

IT would appear that during the past week the water-supply of the district of the metropolis within the area of supply of the Grand Junction Water Company has fallen short of the quantity of water ordinarily distributed to it, and which is required to keep its drainage system in proper action. The inconvenience which has been occasioned by the deprivation of numerous water-closets of their supply of water has been considerable, and sanitary authorities and householders have been and are nigh at their wits' end how to act in the unanticipated crisis. For, curiously enough, it would seem that the Water Companies are so carefully hedged in by their privileges that no legal means are immediately available to bring pressure upon the defaulting Company to relieve its customers from their present perilous difficulty. According to statements made in both Houses of Parliament, the Water Company accounts for the serious deficiency in its supply by the exceptional use of water in street-watering and in watering gardens during the unusual period of droughty weather we have been passing through. We set aside the deficiency in the supply of a particular district by the accidental bursting of a water-main—an accident limited in its effects to the particular district, and which, it is reported, has already been repaired. But the explanation as to the watering of roads and gardens suggests some serious considerations; for these are ordinary requirements of supply during the summer, and it is to be presumed that they are requirements which can be calculated with reasonable nicety. It would appear, however, that a Water Company may calculate these requirements with so narrow a margin for exceptional demands as to expose a great mass of the population of the metropolis to the risk of a water-famine. Moreover, we do not learn that the Company took any measures for warning the local authorities within its district of supply, or its consumers, of the danger of deficiency of water impending, and so giving them an opportunity of putting a stop to needless waste. The subject has been brought to the attention of the Local Government Board, and the Water Examiner of the Board, Colonel BOLTON, R.E., is now engaged in making inquiry into the circumstances of this

failure of supply. Until he has reported upon his inquiry, and the report is made public, we shall not have the information to judge accurately of this extraordinary event.

Annotations.

"Ne quid nimis."

THE DIRECTOR-GENERALSHIP OF THE ARMY MEDICAL DEPARTMENT.

IT has been understood for some months in military medical circles that when Sir William Muir, the Director-General of the Army Medical Department, retires from office in May next, he will be succeeded by Surgeon-General Thomas Crawford, the present head of the British Medical Service in India, that officer having been selected by the Right Hon. the Secretary of State for War to fill the chair at Whitehall on its becoming vacant. A misconception apparently exists in some quarters as to the appointment of the Director-General being by seniority instead of selection; it is well that this misapprehension should be rectified. A military contemporary (the *United Service Gazette*), led away by this idea, has seen fit to take up the cudgels on the part of Surgeon-General Munro, an officer who, being Dr. Crawford's senior in the army, has not been chosen by Mr. Childers for the coveted appointment. We note with regret that the journal referred to, in urging the claims of Surgeon-General Munro for the appointment in question, has thought fit to make a violent attack on Sir William Muir, couched in language singularly ill-timed, inaccurate as to facts, and descending to the level of personal abuse. Sir William Muir's administration needs no defence. When his connexion with the department over which he has so ably presided for the past seven years is severed, he may justly look back with pride on the body of united, contented, and efficient officers he leaves to his successor's command, their efficiency being proved by the crucial test of two long and arduous campaigns. Not being in the confidence of the Secretary of State for War, we cannot give his reasons for the nomination of Surgeon-General Crawford, but we are able to assert that the appointment of Director-General has been almost invariably one of selection. The late Mr. Alexander and Sir James Brown Gibson were neither of them at the head of the list of Inspectors-General when called on to preside at Whitehall-yard. Further, it has been affirmed by more than one Royal Warrant that "promotion to the administrative ranks in the Army Medical Department shall be for ability and merit, upon the selection of our Commander-in-Chief, with the approval of our Secretary of State." Other qualities than war service, however brilliant, or intimate knowledge of regulations and detail, however minute, are required from one who is called on to be the head of a body of scientific officers, in number nearly a thousand. In addition to these, temper, tact, courteous bearing towards high and low—in fact, *suaviter in modo* with *fortiter in re*—are attributes that should be possessed by a Director-General. That Dr. Crawford possesses these qualifications is universally allowed; while his experience of official work, gained as a former head of the Medical Branch of the War Office, his long foreign and active service, and his election to the important post he now holds in India, are proofs that the responsible advisers of Government in these matters can fully justify their choice. It may be unhesitatingly asserted that the appointment of Dr. Crawford to be Director-General, if made, will give very great satisfaction to the officers of the Army Medical Department.

THE DEATH OF DEAN STANLEY.

THE death of Dean Stanley is a cause of national sorrow, wonderfully diffused through all classes, all the more so that it came about somewhat abruptly and after short notice of his illness. The attack began about twelve days before his death with vomiting of bilious and acid fluid—often a precursor of idiopathic erysipelas. In four or five days there was slight sore-throat. On the morning of the 15th inst. he had erysipelatous inflammation, commencing at the bridge of the nose and extending to the right side of the face. His temperature was then pretty high, about 103°. This high temperature had existed from the beginning, except on the Wednesday of last week, when it was only slightly over 99°, and the Dean felt so much better as to be able to go into his library and do a little writing. The erysipelas spread very quickly to the left side of the face, then to the ear, forehead, scalp, down the back, and severely to the right arm as low as the elbow. There was some difficulty in deglutition, breathing became short, and he sank on Monday night. The pulse at first was very infrequent, then gradually rose in frequency, but was steady and of good power till early on Monday morning, when such irregularity and weakness in the heart's action occurred that Dr. Harper thought it right to send for Sir William Jenner at four o'clock. Sir William remained at the Deanery from that time till seven o'clock. During this period the Dean rallied, and afterwards he slept for two hours. In the middle of the day his pulse was firmer, but in the early afternoon severe delirium and embarrassed breathing showed too clearly that the end was not far off. Dean Stanley was attended throughout by his much-valued friend, Dr. Harper. From the morning of Friday, the 15th, Sir William Jenner was associated with him in the treatment of the case. Though never robust, the Dean had not suffered previously from any organic disease.

HEAT AND MORTALITY.

THE effect on the public health of the tropical heat that prevailed in the latter part of last week has not yet been recorded by the Registrar-General. The mean temperature at the Royal Observatory averaged 70·1° during the week, which was nearly seven degrees above the average for the corresponding period in twenty years. On Friday the mean temperature of the twenty-four hours was no less than 79·5°, showing an excess of 16·1°; and the highest reading of the thermometer in the shade was 97·1°, which the Astronomer Royal reports to be higher than any reading previously recorded in the period 1841–81; the nearest approach to it occurred on 22nd July, 1868, when the maximum temperature in the shade was 96·6°. With reference to this memorably hot day in 1868, Mr. Glaisher remarked at the time that the maximum reading was higher than any that had ever before been recorded at Greenwich. As the meteorological records at the Royal Observatory date from 1771, it seems justifiable to assert that Friday, 15th July last, was the hottest day in London during the past 110 years. The heat which prevailed on the 5th inst. terminated with a generally severe thunderstorm, and was followed by five days of very moderate, not to say low, temperature; its effect upon the mortality was thereby lessened. It is impossible to doubt, however, that the effect of the warm period which set in on the 11th inst., especially upon infant life in urban populations, will be most fatal. The mean temperature of the six days and nights ending 16th inst. averaged 71·2°, and was 7·9° above the average. Only a small portion of the fatal consequences of this continued high temperature was recorded in the week ending last Saturday; this effect is, however, strongly marked in the Registrar-General's weekly return for that period.

The weekly deaths in the twenty large towns, which had slowly increased from 2700 to 3022 in the three preceding weeks, further rose to 3361 last week, and showed an excess of 661 upon the number returned in the third week of June. No less than 476, or 72 per cent. of this increase, occurred among infants under one year of age, whereas among persons aged upwards of sixty years the increase was only 24. Summer diarrhœa, which is mainly infantile, is always the most important factor in the production of the increased mortality due to high temperature. In the week ending 25th June only 73 deaths in the twenty towns were attributed to diarrhœa, whereas the number of fatal cases referred to this disease in the week ending last Saturday had increased to 414. These deaths were equal to an annual rate of 2·8 per 1000, and more than 12 per cent. of the death-rate from all causes. The diarrhœa death-rate last week was equal to 4·0 in London, whereas in the nineteen large provincial towns the rate from the same cause did not exceed 1·7 per 1000. The fatal effect of summer diarrhœa is almost invariably shown in the metropolitan returns at an earlier date than in most of the provincial towns. Out of London the highest death-rates from diarrhœa last week were 2·9 in Newcastle-upon-Tyne, 3·0 in Leicester, 3·1 in Nottingham, and 6·4 in Leeds. The fatal outbreak of infantile diarrhœa in Leeds is especially noteworthy, as no less than 21 of the 38 deaths from this disease were recorded in one of the ten registration sub-districts situated within the borough. This Leeds fatality is the more remarkable as only one death was referred to this disease in either of the neighbouring Yorkshire towns—Sheffield and Bradford. In London the death-rate from diarrhœa was nearly twice as high in the east group of districts as the average rate in the rest of the metropolis.

"THE ART OF LIFE."

WE quite agree with a contemporary that "the art of life is very backward." The truth of this remark is illustrated in the, at first sight, curious fact that the great world spends summer in London and winter in the country, that "society" forsakes the Park in the evening at the precise moment when it is becoming delightful, and betakes itself, in quest of enjoyment, to crowded and heated rooms and assemblies, where heat and light and food and close quarters combine to make the most distressing Inferno known to the civilised world. There is no room to doubt the accuracy of this reasoning. We fly in the face of Nature in too many of our customs, and, speaking generally, lead lives of flagrant offence against common sense. It is, however, idle to hope that any effective change will be brought about by moralising. Whatever the promptings of wisdom in the enlightened consciences of the minority, "the world" as a whole worships the golden calf made out of its own sacrifices, and set up as a concession to its weakness and blindness. Fashion rules, and most of us, despite our lamentings and philosophic objurgations of vanity, like to be swayed by her sceptre, and take a pride in being her humble slaves. The astute and seemingly independent critic of dress and the mode would not, on any account, allow himself to be betrayed into an individualism which might expose him to the taunt of being "eccentric." Whatever is conventionally deemed "the right thing to do" is done, and the veriest sceptic becomes devout when he mingles with the votaries of Fashion in the great temple. We all know and feel in our inner consciences that the majority of the maxims and "principles" which govern the usages of life in society are either unreal or fallacious, but we cling to them and affect to obey or act upon them. Nothing short of a politico-social revolution would induce the Legislature to assemble in the dark winter months, or to sit by day instead of night. It would be easier to change the calendar than to put a stop to the giving of dinners and balls and in-door entertainments in the evening. It goes for nothing that men would live longer and lead healthier and happier lives if the entire code of conventional proprieties was revised, and its unwritten but inexorable statutes recast on a rational and natural basis. The physician has the errors and incongruities of social life daily forced on his attention. He does his best to reason his patients out of their most urgently mischievous follies; but, for the most part, the words of wisdom falling from his lips light on stony hearts and barren brains. Society has plenty of courage in the main, but its members lack the most virtuous form of valour, the courage to be sensible.

ARMY HOSPITAL CORPS.

A CHANGE introduced by a recent Warrant in the designation of the officers of the Army Hospital Corps has given rise to much dissatisfaction and bitter feeling among them. Instead of "Captains of Orderlies" and "Lieutenants of Orderlies," they are in future to be designated "Hospital Quartermasters." In answer to a question in the House, Mr. Childers stated that the change had been in a great measure a result of the Warrant of 1877, by which the discipline of the Army Hospital Corps had been transferred to the medical officers. Prior to that date the discipline of the men of the corps had always been in the hands of an officer of one of the regiments at the station, specially nominated for the duty, and had been carried out under him by the captain or lieutenant of orderlies. By the Warrant of 1877 this arrangement was abolished, the discipline of the corps being placed in the hands of the medical officer of the hospital or station, subject of course to the control of the officer commanding the district. The duties of the special officers of the corps are stated by Mr. Childers to be now those of equipment and supply only, under the latter head being included, we presume, the payment of the corps. In this view of the change in the nature of their duties, "the opportunity has been taken to discontinue their inappropriate titles, and give them that which is the proper description of their appointments." At the same time a considerable improvement was made in the emoluments of these officers, and the honorary rank of captain is to be given them on completion of ten years' service as commissioned officers. Under the previous Warrant they did not become entitled to this honorary rank till they were placed on the retired list; while serving they were not captains, but "Captains of Orderlies." If we are correctly informed, the new regulation has been to some extent an outcome of the foolish pretensions of some—a very few—of these officers, and was deemed necessary to the smooth working of the present system. As, however, the change is made a matter of serious complaint by some of the officers, we think it might be judicious on Mr. Childers' part to give those now serving the option of continuing under the new regulations, with their concomitant titles and advantages of increased pay, retirement, and honorary rank, or of serving under the old titles, foregoing all the benefits, present and prospective, of the new Warrant. Of course, it must be understood by any who prefer the latter alternative that at no future period will they be allowed to change their minds, nor will they be entitled to benefit by any further alterations which may be deemed advisable in the interests of the service. The original titles of Captain of Orderlies and Lieutenant of Orderlies were not happily chosen, as they did not imply that the bearers of them were captains and lieutenants in the army; but the mistake thus committed having been discovered, it would be manifestly to the best interests of the service that the change should be made in the mode least offensive to the parties involved in it, and this we think would be effected by the offer of the alternative above suggested.

"TO PREVENT SUNSTROKE."

THE weather being somewhat warmer than the majority of folk find pleasant, the papers are becoming burdened with mingled regrets and suggestions. One of the most recent—and therefore probably one of the oldest—artifices for self-protection is the insertion of a cabbage-leaf under the hat. It is strange that the milliners of Paris, where the thermometer has been standing at 100·2° F. in the shade, did not at once bring out a sunstroke hat or bonnet deftly constructed of leaves, if not of the cabbage, of some more *distingué* vegetable. The whole truth—and it is not much to tell—may be summed up in a sentence. A cabbage-leaf is dense in structure, and being moist, causes some evaporation as it dries. A sheet of thick brown-paper slightly moistened would answer the purpose better, and would not be so unsightly. There is, however, a still more original idea, and that is to lave the head in oil. No doubt oil will help to preserve an equable temperature in the part it covers, and whether the external enemy be heat or cold, a lubrication of oil makes a good shield; but as a celebrated statesman to whom a particular description of port wine was recommended as a remedy for the gout returned answer that he would prefer the gout, so some of us would incomparably rather run the risk of sunstroke than purchase immunity at the price of a wholesale use of hair-oil. The best preventive against sunstroke is to take the weather in good temper, and, as the saying goes, "coolly." We make superfluous heat in our bodies, and prevent the equilibration of the heat produced within and that received from without, by fuming and fretting as we learn the temperature is somewhat above the average for the season through which we are passing. Risks of "sunstroke," setting aside those which are wantonly incurred by reckless exposure, consist chiefly in the dangers of neglecting the general bodily and mental health, at a time and under conditions in which the organism is severely taxed to discharge the duties devolving upon it in the daily exigencies of life. We should avoid either eating, drinking, or in any sort working, more than the minimum need of the moment imperatively requires.

LADIES' SANITARY MISSION.

WE hope that ladies will visit the International Medical and Sanitary Exhibition, and especially those who believe in a "mission," or are looking out for one. For surely there is none more ready to hand, more suitable, nor more abundantly fruitful of good, than that suggested by such a visit. We fear that to some of the sex any suggestion that they could well devote themselves to a careful study of how best to preserve their own lives or those of their fellow creatures, and in particular their husbands and children, from the many common ills arising from insanitary conditions, will be considered humiliating, and will be spurned. But we would urge that large majority who more justly appreciate facts to consider whether they can do better than fit themselves for such a work by a patient and careful study of what the science of the present day has to teach about food, drinks, clothing, ventilation, artificial heating, furnishing, and nursing. The ladies of London in particular have a chance of becoming acquainted with facts and details that will fit them to master many of the constantly recurring and so-called lesser troubles of life, and of being qualified to take such a position in the homes of the land as they have never yet filled—a chance unequalled in the past, and not likely soon to present itself again. A good practical knowledge of sanitary laws and appliances is not possessed by any class of the community, and yet there is nothing more urgently required. Our women in large numbers are calling out for interesting productive work. Let them take up this. Let them be true housewives, dressing and feeding themselves not according to the arbitrary, and often blind, dictates of Fashion, but in harmony with the laws of physics and physiology. Let them be able not only to keep their houses clean in the common sense of the word, but in the scientific sense. And let them add to the mother's yearning over the health of her children an intelligent knowledge of the laws and methods by which that health may be secured and established. In this work they will be unopposed by men, whose struggles with the coarser realities of life leave them but too scant leisure for contending with the secret, silently-working foes of their own homes.

PRESIDENT GARFIELD.

DURING the past week the telegrams from America have contained little or no detail in regard to the condition of the President of the United States, and have been limited to the briefest possible announcement of his continued progress towards recovery. In *The Times* of the 21st inst. is a telegram announcing that the temperature had remained normal during the preceding day, and that the pulse was from 86 to 90. This is the news we have been anxious to receive. A continued absence of fever indicates safety, and if this improvement continue we may confidently expect the President's speedy recovery.

"SMELLS."

IT is an effort of politeness to designate the putrescent dusts and vapours that pervade the streets of London at this season as "smells." They are palpable clouds of dried or half-desiccated débris and products of crude decompositions. It is too commonly forgotten that odours are not mere sensations, though the sense of smell is the faculty by which we become aware of their presence. Whenever a "smell" is perceptible, particles of the substance or substances are floating in the atmosphere, and have passed directly into our breathing passages. A close and fetid *smell* is a finely divided dust or spray composed of the emanations from whatever makes the atmosphere close and fetid. The same physical fact holds good of all odours, whether they be nice or nasty. The reflection is not an agreeable one, but it is politic to speak the truth. Whether the "smell" be that of a close room, a dustbin, or a slaughterhouse, we actually take into our air-chambers, and receive in close contact with their lining membranes, material particles which have become detached from the person, clothes, or foul matters of any sort or description which we "smell." Nothing is gained by mixing some other smell with that which is offensive. The only way to deal with a nuisance of this class effectually is to lay the dust and wash it away, or to apply what is called a *disinfectant*—that is, something which will chemically destroy the offensive and injurious dust or vapour. It would scarcely be too much to say that very few of the so-called disinfectants, and hardly any of the deodorants, have any real effect on the "smell" properly so called. They cheat those who use them into the belief that they are doing away with the nuisance, whereas they only disguise it, substituting one sensory impression for another, but leaving the physical, and therefore the injurious, condition unchanged. If the public are wise, they will not be misled by the plausible testimonials and laudatory recommendations by which most "disinfectants" are supported, but test the actual chemical action of the smell-destroying agencies to which they resort, or put themselves to the trouble of obtaining a trustworthy and explicit scientific opinion. It is impossible to be too particular about "smells," and difficult to see with what pretence of care for health they can be systematically disregarded.

HOMES FOR MENTAL CONVALESCENTS.

THE proposal to provide homes for convalescent patients discharged or removable from asylums for the insane was first introduced in England by Sir William Ellis, the first resident superintendent at Hanwell, in a treatise published in 1838. After praising the excellent service done by Queen Adelaide's fund in aid of paupers discharged from asylums, Sir William proceeds:—"But something further is still wanted. A comfortable place, where such of the patients as might be deemed proper objects might, for a time, find food and shelter and a home, until they could procure employment, would be an invaluable blessing to them, and if such an institution were established, even at the cost of the parishes, it would in the end prove a saving. Many patients might be treated in such an establishment, and eventually restored to society, who are now compelled to remain in the asylum as lunatics in consequence of their retaining some erroneous view on some unimportant matter. Although this does not interfere with their capability of judging between right and wrong, or prevent them from performing their duty, it is an insurmountable bar to a medical superintendent signing a certificate of their sanity, and without this the visiting justices cannot order their discharge. I have no doubt that, in many instances, this erroneous impression would be effaced by a little mixing in the world, and in the ordinary business of life." Sir William Ellis then proceeds to show how a cure may be completed and confirmed by the agency he recommends. It is a matter of congratulation that the proposal to establish institutions having the object detailed has been revived, and that Dr. Andrew Clark has taken under his protection the movement inaugurated to carry it into effect. The active co-operation of general physicians in matters affecting the insane and relating to the treatment of mental disease is much to be desired. The action taken by Dr. Andrew Clark in this matter will be greatly appreciated, and do excellent service. It is also most satisfactory that the scheme has received the approval and warm support of the father of "lunacy" reform, the Earl of Shaftesbury.

VENTILATION OF PUBLIC CONVEYANCES.

SINCE we wrote on "Omnibuses as Distributors of Disease," attention has been directed to the ventilation of public conveyances, and not a day before it was necessary that some amendment should be accomplished. As yet the immediate effect of our remonstrances would seem to consist in the removal of some of the wraps and aprons with which the small and inadequate ventilating apparatus in the front of omnibuses are almost uniformly closed up. This is not much of a gain, because if every aperture in the space under the driver's seat were kept fully open only a minimum of air could be filtered into the chamber in which the passengers are evilly fumigated and poisoned with foul stenches and morbid breath. No remedy is likely to be satisfactory which does not consist in the reconstruction of our English omnibuses so as to place them on a level with open carriages, such as the covered, but not close, brakes and cars met with on the Continent and in a few of our own provincial towns. An "American Tourist" has written to one of the daily newspapers to throw out the hint that "at home" in his own free country, "every window nailed fast would be 'smashed' in a twinkle." We are bound to express the hope that there will be no omnibus-window smashing here. The elbow argument in favour of fresh air was all very well in the old coaching days, but we are more civilised and urbane in our manners now. Nevertheless, something ought to be done in the matter. It is intolerable that our public conveyances should be public nuisances, and worse, because the companies will not reform.

MODERN SANITARY SCIENCE.

AT the anniversary meeting of the Sanitary Institute of Great Britain, held on the 14th inst., the Right Hon. Earl Fortescue in the chair, a highly interesting paper was read by Professor de Chaumont, M.D., F.R.S., on "Modern Sanitary Science." Professor de Chaumont has evidently some scruples in applying the term "science" to our present knowledge of sanitary matters. The want of precision in our acquaintance with these matters is such that, although it may be conceded that we are slowly proceeding in the direction of scientific accuracy, and may look for such accuracy in the future, what we are dealing with now is a Sanitary Art, rather than a Sanitary Science. Nevertheless, the object of what we are pleased to term popular "sanitary science" are sufficiently obvious—namely, the preservation of the lives and health of the community; also the broad lines on which we must proceed to secure this object, and it is pretty clear that on these lines we have already secured some great results. Thus the recent census has shown that our birth-rate is higher and our death-rate lower than had been anticipated during the last ten years. Other marked illustrations to the same effect are to be gathered from the sanitary histories of our army and navy. Looking to the future, Professor de Chaumont takes a most encouraging view of the prospects of sanitation, and in the presence of our present organisation augurs tolerable certainty of advance. But our means of instructing in health matters the masses at large are still insufficient, and, as Professor de Chaumont pertinently remarks, "legislation is of but little use if it goes too far ahead of the knowledge and intelligence of the people."

MR. MAC CORMAC'S FOREIGN HONOURS.

MR. WILLIAM MAC CORMAC has just been decorated by the King of Bavaria with the Ritterkreuz of the first class—a military order of merit—for his services during the war of 1870-71. His name was accidentally omitted from the original lists which have been closed for some time, but when the error was discovered the unusual compliment was paid him of reopening them to add his name. Mr. Mac Cormac has also been made a Commander of the Order of Takodo, for his assistance to the ambulances at the Turko-Servian War.

STRUCTURAL CHANGES IN EXHAUSTED MUSCLES.

THE histological changes produced in muscles by over-exertion have been recently studied by Dr. Otto Roth at Heidelburg. The method employed was repeated electrical stimulation, in most cases a weight being attached to the muscles, and the stimulation continued until the muscles ceased to respond. The chief alteration found was the granular degeneration in small areas, described long ago by Du Bois Reymond as occurring under similar conditions, and also the peculiar vitreous or waxy change in limited spots, which has before been described by Kronecker, and which was found by Rokitansky and Zenker in the muscles of patients suffering from typhoid fever, by Hayem in small-pox, and by Friederich, Charcot, and others in progressive muscular atrophy. Gussenbauer and Waldeyer, however, have ascertained that this change may be produced by simple injury to the muscular fibres. It is highly probable therefore that its occurrence in exhausted muscles is simply the result of the muscular fibres being torn by the tension to which they are subjected exceeding their elasticity. This affords support to the view of Neumann, that the rupture of the fibres in typhoid is the cause, and not the effect, of this peculiar degeneration; the rupture being really due to muscular effort and the friable state of the muscles. A

curious fact incidentally ascertained in these researches was the extreme reflex excitability developed in the rabbit by exhaustion of a few muscles. After a single limb had been experimented upon, the general reflex irritability became so intense that a touch on the back of the neck caused violent opisthotonos.

SANITARY INSPECTION OF LODGINGS.

THE time of annual "flitting" being again upon us, it is necessary to ask if anything has been done by the average lodginghouse-keepers to secure the highly-marketable guarantee of a sanitary inspector. If the matter has been neglected, we would suggest to those who have clear consciences, and feel persuaded in their minds that all is as it should be with their tenements, to submit these to the close scrutiny of an expert—the local officer of health will do—and obtain a certificate. The heads of families would be setting a good example and rendering a permanent service to their families and the community as a whole, if they would demand a certificate of this nature and a clean bill of health before hiring lodgings at the seaside and places of popular resort. A little trouble for a season or two would convince those lodginghouse-keepers who now trifle with the risks of blood-poisoning by sewage gas, or the spread of "catching" diseases by the neglect of disinfection, that the public is beginning to be awakened to the need of taking proper precaution. It would not entail any heavy expense on the lodginghouse-keepers or a vast amount of trouble on paterfamilias, to take these obvious precautions without further delay, and before an Act of Parliament is framed making the provisions to which we refer a legal obligation.

THE ABERDEEN UNIVERSITY AND COMPLETE QUALIFICATION.

AT a recent meeting of the Court of the University of Aberdeen, it was agreed to petition Her Majesty in Council to alter the ordinances regulating graduation in Medicine in the University, so that in future the degree of Bachelor of Medicine shall not be conferred on any person who does not at the same time obtain the degree of Master in Surgery. The propriety of this petition is not quite apparent to us. It will be noticed that the question is one of degrees, not of ordinary *minimum* qualifications. It is quite inevitable, in any future legislation, that the examinations for all *minimum* qualifications shall include all subjects—medicine, surgery, and midwifery. So, too, an examination for a degree in Medicine should include an examination in Surgery. But surely a man may be allowed to take one degree without being obliged to take two. If the taking of a degree in Medicine is to be accompanied by a degree in Surgery, why should it not be required that the candidate take also a degree in Obstetrics? We repeat, the petition is of doubtful reasonableness. A man should be allowed to to take any degree he pleases, according to his bent.

THE INJURED FIREMEN.

WE are glad to be able to state that the firemen who were injured by the fall of a wall at the fire in Oxford-street last week are all steadily recovering. Indeed, two of the four men admitted into Middlesex Hospital are nearly well, and the others are progressing satisfactorily. Considering the serious nature of the accident the injuries are comparatively slight, and consist chiefly of burns and bruises. One man has, however, sustained damage about the back of the neck, which will necessitate rest in bed for some weeks. The ligamentum nuchæ has probably been torn by forcible bending of the head upon the front of the chest. Still, there is no reason to fear that his recovery will not ultimately be complete. It is worthy of remark that though the thick woollen clothing of the men was burnt and torn, there can be little doubt that the nature and quality of the clothes, together with the stout helmet, contributed in no small degree to the marvellous escape from death by burning or crushing.

THE INTERNATIONAL MEDICAL CONGRESS.

ON another page we print, for the convenience of our readers who intend to be present at the Congress, a dail programme of the engagements, which cannot, however, include the very numerous more private entertainments that will be given. It is hoped that H.R.H. the Prince of Wales will speak at the first general meeting, and declare the Congress open. Earl Granville has intimated his intention of giving a reception to the foreign members of the Congress on Saturday, August 6th. Arrangements already made show that the private hospitality that will be extended to our foreign visitors will be on a very liberal scale, and it would be a great convenience to the secretary if those who intend to receive visitors at their houses would inscribe their names in the special book at the College of Physicians. The New York Academy of Medicine has sent over as delegates to the Congress its secretary and treasurer, Drs. J. G. Adams and R. P. Farnham; Dr. Fordyce Barker, the president, will also be present. The number of foreigners already announced to attend exceeds 800.

CHEMISTS AND GROCERS.

WE learn that the chemists of Frome, Somersetshire, have felt and expressed much indignation towards a grocer of the place for selling patent medicines. They regard him as usurping their rights as members of the Pharmaceutical Society. Our informant complains that the chemists have a beam in their eye which they entirely neglect in their anxiety to get the mote out of the grocer's eye. The grocer would seem only a little to blame, inasmuch as he sells medicine without pretending to be responsible for its composition or its fitness. The chemists, on the other hand, assume the right to prescribe, and to judge of disease and accident, to the great injury of the patient, to say nothing of the medical man. Chemists are members of a registered and privileged society, and ought to restrict themselves to their own sphere. In saying so we are only repeating the advice of their own leaders. It is very hard that when medical men are subjected to examinations of ever-increasing severity those who assume their functions and intercept their work are treated with such lenity.

POLICE UNIFORMS IN HOT WEATHER.

IT may well be asked "Why, with the thermometer at 97° in the shade, the police are kept standing unprotected under this blaze, tightly buttoned up in their heavy cloth tunics?" There is nothing which is more opposed to the inbred prejudices of the English mind than any concession to circumstances. The spirit of officialism would be outraged by such a recognition of exceptional conditions as might help to alleviate the sufferings of the many in the service of the fossil ideas of the few. Uniform of any kind, whether that worn by our soldiers or the police, is a burden at times when real work is to be done; but, with rare exceptions, the martinets of the Regulation systems will yield nothing in the hour of individual pressure and need. Whole sections of the population are distressed and embarrassed in their labour for the State and society because Red Tape is ever dominant. It is, of course, paramount that the guardians of public order should march with a measured step, and they preserve that step, to the great comfort and convenience of burglars and street and house law-breakers generally. They are on the alert for the police-

man's tread, and having listened until it has died away in the distance, they know they are safe. It is equally necessary that the force should maintain its semi-military appearance, and so it remains "buttoned up," although strength and temper and health are thereby sacrificed to the carrying out of a stupid and farcical "idea." There is nothing to be said in favour of the *system* which prevails except that it does prevail, and must therefore—right or wrong, wise or foolish—be rigidly carried out.

THE ROLLESTON MEMORIAL.

WE understand that in pursuance of a resolution passed at a meeting held at the house of Dr. A. B. Shepherd, a committee is being formed with the object of founding a prize or scholarship in memory of the late Professor Rolleston. A great many influential names are already on the list of the committee.

ROYAL HOSPITAL FOR INCURABLES.

ON Saturday last the new wing of the Royal Hospital for Incurables, at West-hill, Putney, was opened by their Royal Highnesses the Duke and Duchess of Connaught. The foundation stone of the new wing was laid by His Royal Highness the Prince of Wales in 1879, and by it additional accommodation has been provided for 100 cases. The ceremonial of opening the new building having been gone through, and a number of purses presented, the party adjourned to luncheon in a marquee erected in rear of the new wing. After the usual loyal toasts, the Duke of Connaught, in a quiet, effective, and sympathetic speech, proposed as a toast, "Success to the new wing of the Royal Hospital for Incurables," which was drunk with enthusiasm. It is gratifying to find the members of the Royal Family at all times taking a warm interest in those institutions which have for their special object the relief of suffering; and in such work the Duke of Connaught is ever ready and willing to take his part. Donations were announced to the amount of £5140. The Hospital for Incurables is one of those establishments which do not receive any aid from the Sunday Hospital Fund; and, though its administration in some respects is open to criticism, yet its object is such as to recommend it to all who have a feeling of kindness and compassion for the helpless sufferers who are deemed incurable.

ABUSE OF PUBLIC VACCINATION.

A CORRESPONDENT directs our attention to the abuse of the facilities for public vaccination. He is in a position to speak of what he has seen at a public vaccination station. He testifies that many who go there could well afford to pay a fee of 2*s.* 6*d.* for the operation, and he thinks they would do so but for the wholesale way in which public vaccination and the public vaccinator are advertised by the sanitary local authorities, under the sanction of the Local Government Board. Our correspondent doubtless points out one of the objections to the existing vaccination laws. The moment, however, is not favourable for any change in them. We are in the middle of one of the most direful epidemics of small-pox which has occurred in recent years, and the first instinct of the State is to suppress it. All other sanitary legislation is in such a state of confusion and inefficiency as to be almost useless. Vaccination and revaccination are the only resources of the State, and it prefers paying a few eighteenpences, in a spirit of political economy, to paying the costly bill of pauperised small-pox patients. There can be little doubt, however, that the whole question of the vaccination laws, and the system of public vaccination, will be raised when more leisurely circumstances come. We shall then be glad to hear again from our correspondent. Meantime sanitary authorities might in their publications recommending vaccination encourage those who can do so to seek vaccination at the hands of their own medical attendant.

"THE VALUE SET ON MEDICAL SERVICES" AT NORWICH.

IN the article of last week on the above subject there are two errors to be corrected. In the twenty-second line it is said that "families are attended for six shillings a quarter." What was meant was six shillings a year, or one shilling and sixpence a quarter for a family—the sum that a respectable club pays for one member! By another inadvertence the petty payments to the medical men are stated to include payment for drugs. This, as shown in the latter part of the annotation, is not correct, as there is a special drug bill, allowing fourpence per head per year. These qualifications in no way alter our estimate of the remuneration offered to its medical officers by the institute.

HOSPITAL SUNDAY FUND.

UP to Wednesday the Hospital Sunday Fund amounted to £31,800, which is in excess of the sum collected in any previous year, and still some churches have to account for their collections.

WE recently (May 7th) called attention to a prosecution for malapraxis brought against Dr. Stainthorpe of Wareham, in connexion with a case of fractured femur under his care, in which we were glad to have to state that the verdict was given for the defendant. Unfortunately, as so often happens, the costs have fallen heavily upon Dr. Stainthorpe, and his friends are not only appealing for the sympathy of his professional brethren, but also for help to defray his expenses. Subscriptions will be received and acknowledged by Mr. G. W. Daniell, St. Leonard's, Blandford.

LAST week, in the hall of the Edinburgh College of Surgeons, Professor Spence was presented with his portrait—the gift of "the members of the medical profession of Great Britain and Ireland and the Colonies." Dr. Haldane, President of the College of Physicians, made the presentation. A replica of the portrait is to be hung in the College of Surgeons.

AT the conclusion of the medical session at the Glasgow University last week, the students of the Osteology class presented Dr. J. A. Adams, Demonstrator of Anatomy under Professor Cleland, with a handsomely mounted and fitted oak secretaire, in token of their appreciation of the value of the demonstrations given by Dr. Adams.

IT will be observed from our advertising columns that a representative meeting of the profession to discuss the question of medical reform will be held at St. James's Hall (not at Exeter Hall, as previously announced) on Friday next, at 4 P.M. The meeting is being held under the auspices of the Medical Defence Association.

CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN. The following prizes were awarded at the termination of the summer session:—Practical Chemistry—Class Prize: Daniel Kenny, John McDonagh. Botany—Class Prize: John Buggy, Joseph J. Daly, 1st; Jeremiah B. Ryan, 2nd. Materia Medica—Class Prize: Joseph J. Daly, 1st; Alfred J. Smith, 2nd. Medical Jurisprudence—Class Prize: Daniel Kenny, 1st; John McDonagh, 2nd. Gold Medal for Practical Chemistry, Materia Medica, and Medical Jurisprudence combined: Daniel Kenny.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

King's Lynn (*Norfolk*).—Mr. Walter G. Walford reports an unusually high death-rate in this district during 1880, the rate of mortality among a population, as recently enumerated, of 17,362 being given as 26·05 per 1000 living, and the birth-rate as 32·83. The unusual mortality appears to have been owing to a severe outbreak of scarlet fever, a disease from which the town had been free for several years. Mr. Walford met with a great amount of indifference among the population to measures suggested for checking the progress of the disease, and an indisposition to look upon the malady in a serious light, and he gives several instances of this indifference, and of the carelessness about spreading the infection to which it gave rise. Several persons ridiculed his efforts to limit the spread of the disease; others declined to regard the disease as other than a light one, and looked upon the prospect of their children "catchiog" it as a matter for rejoicing rather than regret—as a matter which, when once passed through, it were well to be quit of. A tailor's boy entrusted by his master with a bundle of clothing to take to a customer stops on his way at his own home, where scarlet fever exists, to get his dinner, depositing his parcel while he eats his food near to the sick person's bed. A district visitor distributing tracts combines the visitation of patients sick of scarlet fever with the distribution of tracts, proceeding, although cautioned against the mischief she might do in spreading the infection, from the houses of sick families to the houses of healthy ones. A lodger suffering from scarlet fever occupies the same bed as a healthy lodger, Lynn having no hospital accommodation for infectious diseases, and the case not being one that the Union house would receive. Mr. Walford's report gives another illustration of the helplessness of a sanitary authority when attempting to contend against the spread of a fatal infectious disease if there does not exist accommodation in the district for isolation of cases.

Bolton.—This report of Mr. Sergeant refers to the fifteen months ending December 31st, 1880. Previous annual reports related to the twelve months ending 30th September, but to meet the requirements of the Local Government Board in respect to annual reports it is now necessary that they shall be so arranged as to include the twelve months ending December 31st. The mortality of the period to which the present report refers was at the annual rate of 20·58 per 1000 living, "the lowest rate of mortality ever recorded for Bolton." The mortality from the principal zymotic diseases during the year had markedly increased, chiefly owing to the great prevalence of measles and scarlet fever and the "extreme fatality" from diarrhœa. Under the compulsory notification clauses of the Local Act, no less than 702 cases of scarlet fever and 784 of measles were reported to the sanitary authority; but, curious to say, there is still no provision for isolation in hospital of cases of scarlet fever, and thus one of the principal advantages which should be derived from compulsory notification is not secured. Mr. Sergeant is now, however, able to state that "the Sanitary Committee fully appreciate the importance of such provision, for after due consideration action has already been practically taken in the matter, and I am in hopes that before another year has passed the town will have been provided with a long-felt want." Mr. Sergeant's observations on summer diarrhœa are full of interest. Writing of the prevalence of this disease in 1880, he says:—"The four weeks ending September 29th were marked by an excessive fatality from diarrhœa, which affected chiefly infants under twelve months, and to a less degree children between one and five years of age. The rate of mortality from the disease during this period amounted to 10·0 per 1000 inhabitants, and 44 per cent. of the total diarrhœa deaths. The sudden extension of diarrhœa corresponded as usual almost exactly with the high temperature which prevailed during the latter part of the summer. While the average temperature was below 60° F. the deaths from diarrhœa were very few in number; but immediately the temperature rose above that point, as in July, the influence was recognised by an increased prevalence of diarrhœa, which in the course of a month fully asserted itself by a vast accession of deaths, which continued throughout August and September. In 1879 the mean temperature never exceeded 59° F., hence we had the lowest death-rate from diarrhœa ever recorded. The continuance of a temperature above 60° F. is now recognised as the chief factor in the causation of diarrhœa, but its precise manner of working has not yet been satisfactorily determined. Most probably the heat exerts itself by assisting in the production of diarrhœa poison from materials always more or less present, especially in overcrowded and insanitary districts, where the habits of the people are filthy, and carelessness is observed in the feeding and nursing of the young. The Registrar-General illustrates this by showing that the ten-year average rate for twenty large towns was 3·7 per 1000, for fifty somewhat smaller towns 3·0 per 1000, while in the remaining rural parts of England and Wales the rate was no higher than 1·4 per 1000. In Bolton it would not be difficult to prove that the diarrhœa varies in a similar marked manner according to the healthy condition or otherwise of the neighbourhood." Mr. Sergeant appends to his report drawings of the ash-closet which has been adopted by the sanitary authority of Bolton, and which is well designed to put an end to the horrible nuisance arising from the common Lancashire midden privy. The use of this form of ash-closet is being steadily pushed in the district, and arrangements are being further made for dealing with such portions of the town refuse as cannot be utilised as manure by destruction by fire.

Belper, Rural (*Derbyshire*).—This large rural sanitary district is subdivided into the Alfreton district and the Belper district, the former under the charge of Mr. Edward Gaylor, as medical officer of health; the latter under the charge of Mr. J. Allen. The Alfreton district contains thirteen parishes, and an estimated population, at the end of 1880, of 18,710. Mr. Gaylor reports, for the whole of his district for 1880, a birth-rate of 30·25 per 1000 living, and a death-rate of 14·59. "The death-rate," he observes, "is a very favourable one, and equal to any of the healthiest rural districts in the kingdom, which has in its population mining and manufactures as well as agriculture." The report gives details of the sanitary condition of the several parishes entering into the formation of the district, and while these details show that much rural sanitary work remains to be done, much has been accomplished. Mr. Gaylor observes: "There is a more ready appreciation of the sanitary officer than was the case six or seven years ago, and a retrospect of my work at that time, compared with what it is now, shows a vast improvement in the general condition of the parishes; although over so large an area, there is plenty more work to be done." The Belper district contains twenty parishes, with an estimated total population, in 1880, of 17,086. The birth-rate of the district in 1880 was a fraction less than 34·6 per 1000 living, and the death-rate 16·3. Mr. Allen's report is written much in the same strain as Mr. Gaylor's—that is to say, considerable sanitary improvements in many parts of his district—much to be effected in sanitary matters in other parts. The picture is presented of great difficulties to be mastered when the medical officer of health enters upon his duties, many of these being overcome in detail, and as a result of eight years' labour a very appreciable improvement in the general sanitary condition of the district. "A retrospect of eight years," says Mr. Allen, "brings with it the recollection of much disappointment. This is, however, chequered by the opposite feeling of satisfaction at seeing some ideas carried out and some aspirations realised." Mr. Allen's report, as Mr. Gaylor's, gives an account of the sanitary condition of each parish in his district. He lays particular stress upon his powerlessness in contending against the spread of infectious disease from the want of hospital accommodation for isolation, and of proper disinfecting apparatus. On the whole, these reports of the medical officers of health for the Belper rural sanitary district give the impression that if sanitary improvement is proceeding slowly there, it is making its way surely, and that the result is anything but disheartening under the circumstances of the district.

ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD FOR IRELAND.

We learn from this report, which is of a highly interesting character, that the average daily number of persons receiving relief in workhouses during the year was 53,796, and out-door relief 60,883, which, compared with similar returns for the previous year (51,946 and

39,629 respectively), shows a material increase, more particularly in reference to out-door relief, a result which was not unexpected. During the year 62,609 persons were under treatment in the workhouses for various affections, including 9053 cases of fever or other contagious disease, with a mortality of 13,478. Last year 709,411 new cases were attended by dispensary medical officers, which included 210,221 visiting tickets; and 147,828 people were vaccinated or revaccinated during the same period, being an increase of 20,835 for the previous year. The fever which broke out in some of the unions was at first supposed to be relapsing fever; but, after due investigation, the cases were found to be of the ordinary typhus and typhoid character. The Union of Swineford, in the county Mayo, was one in which the spread of fever appeared to be much more serious than in others, and the Board deemed it necessary to issue an order under the 149th Section of the Public Health Act, making regulations for the speedy interment of the dead; for house-to-house visitation; for the provision of medical aid and hospital accommodation; for the promotion of cleansing, ventilation, and disinfection; and for guarding against the spread of the disease. These regulations were carried out under the supervision of the vice-guardians and inspector of the Swineford Union, with the assistance of Dr. C. Nixon, a medical inspector employed especially for that purpose. The fever abated towards the end of August, when no further special arrangements were required. The total expenditure of poor rates, for all purposes—viz., relief, medical relief, burial grounds, registration of births, deaths, and marriages, sanitary measures, expenses under Superannuation Act, &c., was £1,187,248, being an increase of £67,493 as compared with 1879.

THE STOCKWELL FEVER AND SMALL-POX HOSPITALS.

The reports of the medical superintendents to the Metropolitan Asylums Board for these hospitals in 1880 do not present much matter for remark. Mr. McKellar, the superintendent of the fever hospital, reports that 882 persons had been admitted to that division of the hospital, of whom 824 had been discharged, 126 had died, and two (who had been sent before the nature of the illness, small-pox, had fully declared itself) were transferred to the small-pox hospital. The greater bulk of the patients admitted were suffering from scarlet fever. Mr. Bernard, the superintendent of the small-pox division of the hospital, reports that this hospital was used for enteric fever during the first quarter of the year. During the three quarters following 402 patients were admitted under treatment, of whom 387 were suffering from small-pox, and 15 from other diseases. Fifty-two of the small-pox patients died, 239 were discharged, and 111 remained under treatment on Dec. 31st, 1880. Of the patients who succumbed 18 had been vaccinated, 8 doubtfully vaccinated, and 26 had never been vaccinated. On the influence exercised by the hospital among the neighbouring population Mr. Bernard observes: "Statements have been made to the effect that small-pox spreads from the hospitals. It is easy to make such statements; but, with regard to this hospital at least, I have evidence which directly proves that these statements are not founded upon fact. That small-pox hospitals, directly or indirectly, may be the means of propagating the disease when improperly conducted is very probable." One thousand and fifty-six visits were made into the wards of the small-pox hospital by relatives or friends of the patients during the year, under the regulations imposed by the managers, and Mr. Bernard states that "as far as he has heard, no one caught small-pox thereby." Eleven small-pox patients walked to the hospital for admission!

The Corporation of Bradford has issued a poster, in view of the occurrence of summer diarrhœa. The poster contains a series of simple precautionary directions to all whom it may concern, prepared by the medical officer of health, Mr. Harris Butterfield.

The Wigan Board of Guardians have voted a gratuity of £20 to Dr. Hannah, one of their medical officers, for extra services rendered during a recent outbreak of small-pox at Ashton. The vote is subject to the approval of the Local Government Board.

A curious mishap appears to have occurred in Derbyshire. Certain colliery proprietors had, it appeared, distributed to their miners chloride of lime for the purpose of disinfecting their houses during the hot weather. The miners appear to have thrown the chloride of lime into the streams of the district, some of them preserved, poisoning the waters and destroying the trout to a large extent. It is not clear what was hoped to be gained by the so-called disinfection of houses in the promiscuous manner attempted. If the disinfection were needed, why not have sought the assistance of the sanitary officers of the district and had it properly performed?

The Dorking Local Board have agreed to pay a fee of 1s. to any medical practitioner who shall give information to the medical officer of health of the existence of a case of infectious disease in the district.

We regret to learn that recent efforts to effect a combination among the sanitary authorities of the Brentford Union, for the purpose of establishing a hospital for infectious diseases, have failed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Under the influence of hot summer weather, and the usually attendant fatality of infantile diarrhœa, English urban mortality showed a further increase last week. In twenty of the largest English towns, estimated by the Registrar-General to contain in the middle of this year a population somewhat exceeding seven and a half millions of persons, 5149 births and 3361 deaths were registered last week. The births were 27 below, whereas the deaths exceeded by 1·04 the average weekly numbers during 1880. The annual rate of mortality in these twenty towns, which had been equal to 18·5, 19·5, and 20·7 in the three preceding weeks, further rose to 23·1 last week. The lowest rates in the twenty towns were 14·7 in Bradford, 16·5 in Wolverhampton, 16·9 in Brighton, and 17·3 in Salford. The rates in the other towns ranged upwards to 22·9 in Newcastle-upon-Tyne, 24·7 in London, 26·0 in Leeds, and 28·1 in Liverpool.

The deaths referred to the principal zymotic diseases in the twenty towns, which had been 441, 498, and 579 in the three previous weeks, further rose to 834 last week; these included 414 from diarrhœa, 115 from measles, 108 from scarlet fever, 96 from whooping-cough, 52 from small-pox, 32 from fever (principally enteric), and 17 from diphtheria. The annual death-rate from these zymotic diseases averaged 5·7 per 1000 in the twenty towns, and ranged from 1·1 and 1·4 in Bradford and Plymouth, to 7·6 and 8·4 in Leicester and Leeds. The fatality of measles was proportionally greatest in Liverpool and Sheffield; of scarlet fever in Hull, Nottingham, Sunderland, and Leicester; and of whooping-cough in Leicester, Newcastle-upon-Tyne, Manchester, and Salford. Of the 17 deaths from diphtheria in the twenty town no less than 6 were recorded in Portsmouth; and the highest death-rate from enteric fever occurred in the same town. The 414 deaths referred to diarrhœa showed a further increase of 234 upon recent weekly numbers; the fatality of this disease showed the largest excess in Leeds and London, the rate in London being more than twice as high as that which prevailed in the nineteen provincial towns. Small-pox caused 56 more deaths in London and its outer ring of suburban districts, 3 in Liverpool and 1 in Brighton; no fatal case of this disease was recorded in any of the seventeen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily declined from 1644 to 1192 in the five preceding weeks, further fell to 1112 on Saturday last, of whom 5 were inmates of the "Atlas" hospital ship, and 290 of the Convalescent Camp Hospital at Darenth. The new cases of small-pox admitted to these hospitals, which had been 321, 254, and 141 in the three previous weeks, rose again to 177 last week. The St. Pancras and Islington Camp Hospitals at Finchley contained 36 and 34 patients respectively on Saturday last. The number of patients in the Highgate Small-pox Hospital was 70 on Saturday, and showed a further decline from recent weekly numbers; 13 new cases were admitted during the week.

The deaths referred to diseases of the respiratory organs in London, which had been 181 and 195 in the two preceding weeks, declined to 168 last week, but were only 2 below the average weekly number in the corresponding week of the last ten years; they included 88 from bronchitis and 50 from pneumonia. The annual death-rate from lung dis-

cases, exclusive of phthisis, did not exceed 2·3 per 1000 in London last week; the rate from the same diseases was equal to 6·5 in Liverpool.

The causes of 72, or 2·2 per cent., of the deaths in the twenty towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 1·3 per cent., whereas in the nineteen provincial towns it was more than twice as high, averaging 3·2 per cent. No uncertified deaths were registered last week in Portsmouth, Leicester, or Nottingham; whereas the proportions of such deaths were largest in Birmingham, Leeds, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in eight of the largest Scotch towns, having a population now estimated at rather less than a million and a quarter persons, which had been equal to 20·9 and 20·4 in the two preceding weeks, further declined to 18·9 last week; this rate was 4·2 below the average rate in the twenty large English towns last week. The rates in the eight Scotch towns ranged from 14·4 and 17·0 in Leith and Edinburgh, to 19·8 and 27·8 in Glasgow and Greenock. The deaths referred to the principal zymotic diseases in the eight towns, which had been 91 and 76 in the two previous weeks, further fell to 54 last week; they included 20 from diarrhœa, 10 from whooping-cough, 7 from measles, 6 from scarlet fever, 6 from diphtheria, 4 from fever (typhus, enteric, or simple), and one from small-pox. The annual death-rate from these zymotic diseases averaged 2·3 per 1000 in the eight towns, and was 3·4 below the average rate from the same diseases in the twenty English towns. This zymotic rate ranged in the eight Scotch towns from 0·7 and 1·6 in Dundee and Edinburgh, to 3·8 and 4·9 in Greenock and Aberdeen. The fatal cases of diarrhœa in the eight towns, which had been 27 in each of the two previous weeks, declined to 20 last week; they were equal to an annual rate of 0·79 per 1000, against 2·8 in the twenty English towns. The largest proportion of diarrhœa fatality occurred in Aberdeen and Glasgow. The 10 deaths from whooping-cough showed a further decline from recent weekly numbers, and included 4 in Glasgow and 3 in Edinburgh. Six of the 7 deaths from measles were recorded in Glasgow. The 6 deaths from scarlet fever included 3 in Glasgow, as also did the 6 deaths from diphtheria. The deaths referred to typhus, enteric, and simple fever, which had been 18 and 8 in the two preceding weeks, further declined to 4 last week, of which 2 occurred in Glasgow and 1 each in Edinburgh and Dundee. The annual death-rate from "fever" averaged only 0·16 per 1000 in the eight towns, against 0·22 in the twenty English towns. The fatal case of small-pox was of an adult male in Leith, who is supposed to have been exposed to contagion in London. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy), which had been 114, 98, and 87 in the three preceding weeks, rose again to 98 last week, and were equal to an annual rate of 3·9 per 1000, against 2·0 from the same diseases in London. The greatest fatality of lung diseases occurred last week in Glasgow and Edinburgh.

HEALTH OF DUBLIN.

The rate of mortality in Dublin was again somewhat higher last week. The annual death-rate in the city, calculated upon the population enumerated in April last, which had been equal to 18·7 and 20·6 in the two previous weeks, further rose last week to 21·1. During the thirteen weeks of the last quarter the death-rate in the city averaged 25·7 per 1000, against 20·2 in London and 21·1 in Edinburgh. The 141 deaths in Dublin last week showed a further increase of 3 upon recent weekly numbers; they included 14, or 10 per cent., which were referred to the principal zymotic diseases, against but 5 and 7 in the two preceding weeks. These 14 deaths from zymotic diseases included 10 from fever (typhus, enteric, or simple), 2 from scarlet fever, 1 each from diphtheria and whooping-cough, and not one either from small-pox, measles, or diarrhœa. The annual death-rate from these principal zymotic diseases did not exceed 2·1 in Dublin; the rate from the same diseases was equal to 7·2 in London and 1·6 in Edinburgh. The deaths referred to fever, which had been but 2 and 3 in the two previous weeks, rose again to 10 last week, and exceeded the number in any week since the end of April; the annual death-rate from this cause was equal to 1·49 per 1000, and was nearly seven times as high as the average fever rate in the twenty large English towns. The 2 fatal cases of scarlet fever corresponded with the number in the previous week, and the deaths from the other zymotic diseases were satisfactorily few. The deaths of infants showed a decline, whereas those of elderly people were more numerous than in any recent week.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE ISLE OF WIGHT.

We fear we have been too premature in taking the example of Ventnor as an instance of the excellent spirit in which the sanitary authorities of the island were taking action on the report of Dr. Ballard. West Cowes attempts to throw dust into our eyes by sending us a report (see THE LANCET, July 2nd) which completely avoids the particulars given by Dr. Ballard on the sanitary state of this district, and gives a view of the present good health of the locality which may mean anything or nothing. More recently there has reached us a report of the proceedings of the rural sanitary district of the island on Dr. Ballard's report. The rural sanitary authority is looking forward to the near approaching meeting of the British Medical Association as giving an opportunity of enabling them to show the fallacy of Dr. Ballard's report in many particulars, as if the responsible statements of a responsible man could be easily set aside by any opinion volunteered by individuals under circumstances of which we cannot know all the particulars. The authority, however, while deciding to improve their nuisance inspection, by increasing the number of their inspectors and their pay, and requiring that the whole of the time not occupied by them in connexion with vaccination should be given to their duties, have refused to make any change in their appointment of medical officers, either by adopting a single one, or by some arrangement for co-ordination of their work under the present arrangement. The general feeling of the members of the authority was, the report tells us, that it was more important that good men should be appointed as inspectors of nuisances than that the present arrangements as to medical officers of health be altered, and one medical officer of health be appointed for the whole district. This is peculiarly unsatisfactory in view of the future of the island. Incidental writers have written glibly of errors in Dr. Ballard's report, but this gives us little concern. We are familiar with this accusation against the medical inspectors of the Local Government Board, and within our experience it has simply meant that they have directed attention to faults which have previously escaped the attention of the local authorities, and the local authorities became resentful of their shortcomings being thus brought to light. Local authorities are particularly unwise in taking this line of defence when an observer of the known accuracy of Dr. Ballard is concerned. We are disappointed in finding that the sanitary authorities in the Isle of Wight are by no means acting uniformly or prepared to act uniformly in setting their localities in order.

THE HOTELS OF ROME.

It appears that we were in error when we stated a short time ago that a threatened opposition of the Italian Medical Association to the Sanitary Commission organised by the *Italian Times* for the purpose of examining into the sanitary condition of the hotels of Rome had been withdrawn. The opposition was merely delayed until the Commission had done its work, when it became as purposeless as foolish. However, the Association has now denounced the Commission, and the journal which instituted it, in a series of formal resolutions which declare that its formation was an insult to the dignity of the medical community of Rome and antagonistic to the interests of the city; that it was wholly uncalled for so far as the hygienic condition of the hotels of Rome was concerned; and that there was no solid ground for the assertion of travellers that they had suffered from enteric fever or in health generally from the defective sanitary arrangements of the hotels. The resolutions, in fact, express a doubt of the occurrence of typhoid fever among travellers, and suggest that if such have occurred they have been due to ordinary sources of organic deterioration of a kind to be found in every city, the inconvenience of long journeys, and

to the "irrational curative measures" to which travellers are liable to be subjected. The Association protests therefore against the "anomalous foreign interference" manifested by the formation of the sanitary commission of the *Italian Times*. It is with profound regret that we note the action taken with regard to this matter by the Italian Medical Association. The view it takes of the "dignity" of the medical profession in Rome we venture to think will not meet with large acceptance by the profession elsewhere. The endeavour to minimise the incidence of enteric fever among visitors to Rome merely shows that the Association has taken no pains to acquire accurate information on the subject. The explanation of enteric fever suggested in place of that mainly adopted by visitors who have suffered from enteric fever in Rome is simply puerile, and the whole series of resolutions adopted by the Association represents the medical profession in Rome as prosecuting a petty squabble concerning foreign physicians and journalists, the public health bearing of which is not obvious, while the professional malice is conspicuous. We decline to receive the resolutions of the Association as in any true sense expressing general professional feeling in Rome as to the commission of the *Italian Times*, holding, as we believe we have reason to do, too high an opinion of the majority of the practitioners of that city to accept conclusions which are antagonistic to the common morality of the profession, and which betray a regrettable ignorance of the subject under discussion. These resolutions must necessarily exercise a disastrous effect upon the minds of visitors as to their estimate of the Italian medical profession in Rome.

SMALL-POX IN THE PARISH OF WOKINGHAM.

At the Whitsuntide club fêtes in the neighbouring parishes of Swallowfield and Finchampstead, both of which join the parish of Eversley, celebrated as the home of Canon Kingsley, a musician, who had come down from London to join his band, which had been engaged to play at the fêtes, was sickening with what turned out to be small-pox. He was not so indisposed as to be unable to go through his day's duty, blowing strenuously through a wind instrument, and thus presumably diffusing infection among the hundreds of people who congregate from the surrounding parishes on such occasions, some thirty of whom have already sickened with the disease. At Swallowfield, the home of the late Miss Mitford, and made notorious by her work, "Our Village," a small-pox hospital has been established, and here some twenty cases have arisen, all traceable to the musician. The property in this parish is chiefly owned by Sir Charles Russell, M.P. for Westminster, and his Grace the Duke of Wellington, and the poor are well provided, as may be expected, with good cottages and healthy surroundings. The cases here are of a mild type. At Finchampstead, an adjoining parish, the property in which is chiefly owned by Mr. J. Walter, M.P. for the county, the cottages are even more than good, for they are models of construction, and all their surroundings healthy. Here six cases have arisen, one of which has been fatal. In the parish of Wokingham, one mile from the town, is a small hamlet, called Emmbrook, from the name of a small brook, a tributary of the river Laddon and Thames. Here a case of small-pox was imported from London, and assumed a very malignant form, and was fatal. It was communicated to four others, and these have died. It may be fairly asked why should cases in one locality be so fatal, and not in others, in an area circumscribed by about twenty miles? Why should disease thus mark out as clearly as lines on a map what may be called a "topographical pathology?" Here is one answer suggested. Into the Emmbrook much of the sewage of the town of Wokingham is emptied; the stream is often very offensive. Proceedings are now pending by the Thames Conservancy to stop this pollution of the stream, and oblige the local sanitary authority of Wokingham to divert the sewage of the town. But in the meantime the poor folk at Emmbrook are driven, through want of a better water-supply, to use this polluted stream for general purposes. Here, then, is an instance, added to many others, of malignant disease and death associated with a polluted stream; and who is to say it is not dependent on it? Here, in a circumscribed area, small-pox imported into one locality, with insanitary surroundings, is fatal in five cases out of six; whereas in other districts, with an absence of these unhealthy surroundings, it has been fatal only in one case in twenty-five.

ENDEMIC GOITRE.

Mr. G. A. Lebour, M.A., Professor of Geology in the University of Durham College of Physical Science, Newcastle-on-Tyne, has published a brief paper on the geological distribution of endemic goitre in England. He first examines the data obtained on the subject from carefully conducted studies in France, and next considers the distribution of the disease in England. "In England, as in France, one point," he says, "and one alone seems to be established as being common to those rocks on which goitre is found not to occur; the absence of limestone, together with that of metallic impurities, and especially sulphide of iron. In both countries the rocks which support most goitre are such as are both calcareous and metalliferous. But there are plenty of facts to show that metalliferous impurities alone cannot be credited with the origin of the disease, else the Devonian and the granite would not be free from it. Neither will the absence of limestone alone be sufficient to check the growth of bronchocele, else the liguitiferous beds of France and the ferruginous sands of the weald would not support it. On the whole, there is a striking sameness in the geological distribution of the disease in the two countries."

Dr. James W. Miller, of Dundee, has now published in a handy form a most instructive lecture which he delivered in March last to the Naturalists' Society of that city, entitled "A Sketch of the Discovery of Vaccination and of the Evidence of its Power."

THE SERVICES.

We have had an opportunity of examining Surgeon-Major Hoiles' equipment for infantry soldiers, which appears to have some advantages over that now in use. The framework of cane keeps the valise to some extent off the man's back, which must add considerably to his comfort, and the weight is better distributed. But we think the lower end of the frame is too pointed, and would be likely to cause inconvenience and discomfort, and the shoulder straps appeared to us to press too much upon the arm-pit. These objections might be overcome without difficulty, and the equipment would then, in our opinion, prove a considerable improvement on the present regulation one. We cannot but think, however, that in all the trials made by the authorities of suggested improvements of this kind the time allotted for trial is too short. It ought to be sufficiently long to allow the novelty to have worn off, as soldiers almost invariably think that any change is for the better, and it is only after a fair trial, as regards time, that they begin to find out the drawbacks, as they do in the very commencement the advantages.

It is satisfactory to find that the lesson taught by the late unfortunate affair at Aldershot has not been thrown away upon the military authorities. At a field-day at Woolwich the troops were paraded at 5 A.M., and returned to barracks before 9 A.M.; and at Portsmouth H.S.H. Prince Edward of Saxe-Weimar, commanding the Southern District, has issued orders forbidding any field-day or parade of troops to take place between 9 A.M. and 4 P.M. during the continuance of the hot weather.

The *Bombay Government Gazette*, of June 16th, publishes the following:—"H.E. the Governor in Council is pleased to promote the following medical officers to the rank of Brigade-Surgeon:—Surgeon-Majors L. S. Bruce; W. P. Partridge; H. Cook, M.D.; J. Pinkerton, M.D.; C. Joynt, M.D.; W. E. Cates; J. Cruickshank; C. K. Colston; and W. H. Colvill."

Surgeon-Major T. Beaumont, Bengal Medical Service, has been appointed Residency Surgeon, Hyderabad.

Brigade-Surgeon J. Hanbury, C.B., has been ordered to Dover for duty on return from field service in Afghanistan.

Deputy Surgeon-General Alexander Smith, C.B., has been ordered to Gibraltar from India, and will be appointed Principal Medical Officer of the garrison, vice Surgeon-General William Munro, C.B., about to retire from the Service.

Surgeon-Major W. M. Skues, Army Medical Department, has been granted leave of absence, on private affairs, from India, for six months.

Cholera has appeared at Meean Meer, in the 8th King's Regiment, and two companies, amongst whom several cases had terminated fatally, have moved into camp.

ADMIRALTY.—Staff-Surgeon Martin Magill, M.D., has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet, with seniority of 23rd June, 1881.

Surgeon E. B. Lowe has been appointed Surgeon and Agent at Bournemouth, vice White. Surgeon H. G. T. Strickland, M.B., has been appointed to the *Duncan*, vice Clark.

REPORT ON WOOLSORTERS' DISEASE.

MR. JOHN SPEAR'S report to the Local Government Board upon the so-called "woolsorters' disease," as observed at Bradford and in neighbouring districts in the West Riding of Yorkshire, has been issued. It contains a full account of the disease, together with some suggestions upon etiology and remedial measures, and the pathological inquiries of Professor Greenfield. The inquiry commenced in May, 1880, and was especially directed to the elucidation of the obscure class of cases which presented no external lesion, and were by some held to comprise septicæmia and anthrax, whilst others did not recognise any specific feature in the attacks. Five fatal cases occurred during the inquiry, and post-mortem examinations were held upon them; their etiological identity was established, and positive experimental evidence obtained in proof of woolsorters' disease being anthrax fever. The data upon which these conclusions are based are considered under the following heads—(1) The disease as it is known in the Bradford district; its general history, symptomatology and morbid anatomy. (2) The etiology of the disease, with consideration of the woolsorters, their mortality statistics and occupation, and the history and relative circumstances of recent attacks of the disease. The third head deals with the preventive and remedial measures suggested by the inquiry.

General History of the Disease.—Anthrax has been known for centuries as affecting man and animals, but the existence of the internal form of the disease had been lately almost forgotten until the report of Dr. Russell to the Local Government Board in 1878 on an outbreak among horse-hair workers in a Glasgow factory. In Bradford the disease was not recognised as anthrax; it was called woolsorters' disease, and in the death returns it appears under the name of the most prominent symptoms, especially the lung symptoms, so that it was regarded as a sort of pneumonia due to the inhalation of dust incidental to the occupation. Its appearance in the Bradford district is generally dated from the importation and working of alpaca wool forty-three years ago; but since the introduction of Van mohair in 1863 the cases have become more numerous, the occupation of woolsorting came to be regarded as especially dangerous, and rumours of the disease being bubonic plague were disseminated. Mr. Spear succeeded in obtaining the history of fifty cases from medical practitioners, friends of the sufferers, and from the woolsorters. As proving the identification of all these cases as anthrax, he urges that each of the five fatal cases during the inquiry was found to be anthrax; that in several cases the presence of malignant pustule put the diagnosis beyond doubt; that the wool which had undoubtedly been the source of the infection was likewise the apparent and only discoverable source of unequivocal attacks of anthrax in sheep and cattle; and that all the cases occurred amongst persons brought into immediate contact with the wool or hair of sheep and goats.

Pathology.—From November, 1879, to September, 1880, there occurred in the Bradford, Keighley, and Queensbury districts nine cases of external anthrax with two deaths, and twenty-three cases of internal anthrax, with nineteen deaths. Of the external form, or malignant pustule, Mr. Spear discriminates four varieties: (*a*) Purely local affection at seat of inoculation; (*b*) accompanied or followed by constitutional symptoms; (*c*) where the local manifestation is followed by the secondary localisation of a constitutional infection; and a (*d*) variety of a minor papule or pustule not hitherto ascribed to specific infection, but not uncommon among woolsorters, and with medical men and others who make post-mortem examinations on anthrax cases. One example is given of the second variety, and two fatal cases coming under the third variety are also described.

Internal anthrax is the more commonly recorded, and the more fatal of the two forms. It is marked by definite stages of incubation, of invasion or prodromata, variable in duration and accompanied by intermissions, and invasion of the acute toxic symptoms with fatal results in from two to five days, or improvement on the sixth or seventh day. But death may ensue later from secondary inflammatory processes in which the lungs are especially apt to be involved. Out of nineteen fatal cases death occurred in three in thirty-six hours, in two in two days, in six in three days, in two in four days, in four in five days, and in two (secondary septic inflammation) in eight days. There is evidence, moreover, of a milder form, and also many histories of long-continued malaise and symptoms suggestive of chronic anthracoid disease analogous to malarial disease. Very little exact information could be obtained to establish the duration of the stage of incubation: in one case this was apparently only two days; in another four; in another twelve; and it seems possible that the germs of the disease may remain latent often for long periods. The prodromal stage is marked by chilliness, weariness, and muscular depression; with more or less profuse sweats; flushing of face; sleeplessness. There occur early a sense of constriction of the chest, shortness of breath, frequent sighing and yawning. There may be aching in the limbs, cramps, numbness, or less commonly loss of power and staggering gait. Headache is frequent; pain or stiffness in the neck, dizziness, nausea, and vomiting are also symptoms of this stage, which passes, after a variable time (sometimes only a few hours), into the stage of full development. Now occur more marked prostration and restlessness, with accelerated respiration and pulse, and an irregular temperature. Collapse may quickly ensue, or asphyxia from rapid pleural effusion. Usually the stage is a little more prolonged; the fever becomes pronounced and continued (the temperature often reaching 104° or 105°, with irregular remissions), and more or less profuse perspirations take place. The symptoms of the prodromal stage are increased—headache, vomiting, excitement, delirium or somnolence, or the mental faculties may be unimpaired to the end. There is often early evidence of severe and acute pulmonary congestion, or œdema; sometimes profuse hæmoptysis; or there may be more or less severe gastro-intestinal symptoms. There is loss of appetite from the first, with moist furred tongue, colic, vomiting, diarrhœa, and jaundice. A remission may occur, followed by syncope, cyanosis, or increase in the cerebral symptoms. In two cases tetanic spasms supervened; in one cerebral hæmorrhage. Or a fatal issue may be brought about later from the secondary inflammations, or in a true relapse of the disease. On the other hand, recovery is not so rare as has been supposed; many facts pointing to long and tedious convalescence, marked by muscular tremors and cramps, and sometimes cutaneous eruptions. No immunity from a second seizure is conferred by one attack.

Pathological Anatomy.—There is early decomposition of the body; petechiæ on skin. The heart is flabby, hæmorrhages in its walls; blood fluid, and endocardium blood-stained; often considerable pericardial effusion. The lungs are hyperæmic, often with small scattered hæmorrhages, perhaps with œdema, or true pneumonia, or metastatic abscesses, sometimes hæmorrhagic infarcts. The smaller hæmorrhages are due to emboli, formed of bacilli; the larger depend probably on acute nutritive disturbance of the walls of the bloodvessels and tissues. The bronchial glands are swollen, soft, and purple or blackish. The bronchial mucous membrane is reddened and the seat of hæmorrhagic extravasations. The pharynx and trachea are hyperæmic. There is congestion of the abdominal organs, with various hæmorrhages; the spleen is usually enlarged and soft; the liver less often hyperæmic; the kidneys much congested and the seat of cloudy swelling. Often acute intestinal catarrh with swollen mesenteric glands; no anthrax carbuncle was ever found in the intestine. In two cases the bladder contained albuminous urine. There may be hæmorrhages in the brain. A common feature is a serous or sero-hæmorrhagic jelly-like infiltration in the various connective tissues, especially in the lax tissue of the neck and mediastinum, under the subpleural and perirenal tissue. The bacillus anthracis usually always, but in widely varying quantity and distribution, occurs in the blood and extra-vascular fluids.

Etiology.—The evidence gained in this inquiry justifies the application of the name "woolsorters' disease." It is,

indeed, a disease of woolsorters—who form but a small class of skilled workmen—doing their work under good hygienic influences, with the exception of two special evils to which they are exposed—viz., dust and infection. There is a very high general mortality amongst woolsorters, the deaths being ascribed mainly to pneumonia, congestion of the lungs, bronchitis, consumption, and the less common forms of zymotic disease (pyæmia, &c.). The remaining mortality is made up by a comparatively large proportion of deaths from meningitis, enteritis, &c., which, like the other acute inflammatory affections mentioned, may, with great probability, be considered as secondary effects of the anthrax poison. The influence of dust in producing lung disease is not ignored, but the more "woolsorters' disease" is inquired into, this influence becomes less prominent as that of a specific infective agency. Mr. Spear even raises the question whether the prevalence of tubercular phthisis amongst woolsorters, apart from any question of dust, may not be found in the prevalence of disease of the nature of anthrax, and does not assent to Dr. Rabagliati's explanation of this prevalence—viz., that the occupation being light is sought after by those already predisposed to consumption. An instructive table is given of the registered causes of fifty-four deaths, believed by woolsorters to have been "woolsorters' disease," the list comprising a very large number of cases of pneumonia and bronchitis, seven of blood-poisoning, two of meningitis, and only three returned as "woolsorters' disease." Dr. Bell attempted to obtain statistics of non-fatal sickness among sorters, but the result has been rather indefinite. "They show that sorters of foreign wools complain much of the indefinite symptoms that I have suggested may be due to a chronic or abortive anthrax infection."—p. 13.

The *occupation* of woolsorting is next described. The "wool"—i.e., the wool and hair of sheep, goats, and camels—is sorted into qualities according to its colour, length, or fineness. The sorters consist of two classes—the "packmen" who open the bales and do the rough sorting, and the "daymen" who look over this and perhaps again sort it. The rooms in which this is done are mostly those in which the bales are stored. The wool after sorting, if not wanted, is stored up (sometimes for years); if wanted, it is taken to the washing bowl, or shot down *unpacked* from the sorting room to a packing room or to the washing room. Much dust is thereby distributed, especially in the case of the foreign wools. In the washing room the wool is passed through two or three "suds" at a temperature of 110° to 140°, and dried by a warm air blast or in hot air chambers. It is thence taken to the combing room, and after passing through the machinery is manufactured into "toppings" and ready for spinning. It is only in the first process that it is much subjected to manipulation, and therefore the greatest danger is in that stage.

The residual products from the washings, &c., are either deposited with manure and other refuse on arable land, or sold to manure manufacturers. "Whether such manure, carried in to watercourses by the rain, or settling on grass or hay, ever causes splenic fever (anthrax) in cattle is a point to be determined. Possibly, when mixed as described with ordinary manure, the decomposition which the mass undergoes suffices to destroy the virus." The sud water is run into settling bowls, and the supernatant liquid drawn off into vats, where it is slightly acidulated by sulphuric acid, and warmed and agitated by a jet of steam to separate the grease. The liquid is then passed into drains. There is the strongest evidence to show that it remains capable of infecting sheep and cattle when it is run direct upon pasture land; but no evidence has been yet obtained of any infection through drinking the water of streams contaminated by it. Much dust also collects on the factory roofs, to be washed into sewers by the rain. The bags which contained the wool are usually sold unwashed, and used for various purposes—floor-coverings of poor houses, horse-cloths, and cheap upholstery.

The *wool* worked in these factories consists of "foreign" as distinguished from the English and Australian produce. The latter wool is less dusty, more greasy, and more clean—probably because of the practice of carefully washing the animals before shearing; and "fallen" fleeces—i.e., the fleece from an animal that has died from disease—are excluded. Everything points to the infection being chiefly in these fallen fleeces, probably because the animals from which they were stripped had died of anthrax. The fallen fleeces only occur in the inferior wools, but they can, as a rule, be recognised. They are not in large number, even in the foreign wools. The dry foreign wools in use in Bradford district comprise the following, which are enumerated, so far as present experience permits, somewhat in the order of their apparent noxiousness:—(1) Van mohair; (2) Persian wool; (3) camel's hair; (4) alpaca; (5) Turkey mohair, (*a*) average, (*b*) inferior, (*c*) locks; (6) Pellitan; (7) Cape mohair, (*a*) superior, (*b*) inferior, (*c*) locks; (8) Cashmere. Some facts are given about each of these.

The report then recounts the histories of the recent attacks of the disease.

Notes of thirty-eight cases are given; the first ten are all from one factory within seven months, and all among workers in Van mohair. Mr. Spear sums up this series as follows:—"During seven months 612 bales were sorted, and in this work eleven men on an average were employed in all, but at scattered periods, twelve weeks. Seven of these men while working upon the material suffered; three from fatal attacks, one from malignant pustule, one from an acute attack of the internal form of the disease, and two from apparently abortive attacks; four other men, after having discontinued the work for periods ranging from two days to six weeks, suffered from apparently the acute internal form of the infection, and one of them, a man who had not, so far as it could be discovered on the most careful inquiry, been exposed during the interval to what has hitherto been looked upon as dangerous wool, died." Details of cases from other factories follow, and in association with one group at Keighley there occurred the remarkable outbreak of splenic fever among cattle pastured on fields which had been manured by the washings of Van mohair and other wools, and already detailed in Professor Greenfield's lectures at the London University. No animals were affected but those pastured on the fields over which the sud water and sewage were distributed. The bacillus was found in the fluids and in the blood of these animals, and inoculation experiments were produced through them. It was found that the Van mohair in question was of several consignments, probably the great bulk of one year's growth—viz., 1879; and in an appendix there are given facts showing that the woolsorters of Constantinople who had the handling of the material there suffered like the English sorters, and "that a disease named in Turkey 'Dallack,' which is most certainly anthrax, exists amongst the goats from which this wool or hair is derived." We have not space to follow the report through the records of the cases, and pass to its concluding section.

Remedial Measures.—After quoting the recommendations of a coroner's jury which inquired into the cause of a woolsorter's death, and others drawn up by the manufacturers and men, Mr. Spear points out that unless the first washing of the supposed noxious wool is thorough it will not be effective. At present it is little more than a process of steeping, which must even encourage the development of the contagia. But if attention were paid especially to the fallen fleeces, which might well be made to form a separate class, these, as being the chief, if not the only seats of the contagium, might be most thoroughly subjected to a preliminary disinfection. As to measures of disinfection, heat and cold cannot be applied of sufficient intensity to destroy the germs, and many chemical disinfectants would alter the quality of the wool, and render it unfit for its further manufacture. Steeping in solutions of sulphurous acid is suggested, and the vapour of sulphurous and carbolic acids also. Additional precautions consist in the free ventilation of the sorting-rooms, their separation from the store-rooms, and improved measures for disposing of the dust, as well as increased attention to cleanliness on the part of the men.

Appendix A consists of the clinical and pathological notes of fatal cases, with Dr. Greenfield's reports, and drawings of bacilli. Appendix B gives mortality tables amongst woolsorters in the districts inquired into in the ten years 1870-79. In Appendix C, Mr. Spear enters into some theoretical considerations, especially as regards the predisposing effect or influence of a vegetable diet in inducing an attack of the disease.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.

A sum of 10,000 francs has been bequeathed by the late J. V. Moët-Remont to the Epernay Hospital. Mr. W. E. Buck bequeathed £100 each to the Warwick Dispensary and the Warneford Hospital, Leamington. The National Hospital for Consumption, Ventnor, has received a legacy, with interest, of £536 10*s.* 8*d.* under the will of the late Mrs. Caroline Batty.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on Friday, the 15th inst., the Sale and Use of Poisons Bill was read a second time.

In the House of Commons on Monday, further petitions against the Charitable Trusts Bill were presented from Redhill, from the Corporation of the Sons of the Clergy, Infant Orphan Asylum, Bartholomew's Hospital, and Merchant Tailors.—Mr. H. Fowler's return of the number of small-pox hospitals in the metropolis was presented.—The Veterinary Surgeons Bill (Lords) was read a second time, after an appeal by Dr. Lyons for the establishment of a Veterinary College in Ireland, to which Mr. Forster replied that the subject had the attention of the Lord Lieutenant.

On Tuesday, Mr. Gladstone stated that the Charitable Trusts Bill would not be proceeded with.

On Wednesday, the St. John's Hospital (Bedford) Bill was read a second time.

Water Famine.

Mr. Thorold Rogers gave notice that on Monday next he will ask the President of the Local Government Board whether he is aware that the district supplied by the Southwark and Vauxhall Water Company has been and constantly is within an hour's risk of water famine; and whether he can suggest the means by which the danger of so serious a calamity can be obviated.

On Thursday, Mr. A. Arnold put a question as to the failure of the supply of the Grand Junction Water Company. Mr. Dodson said he was one of the victims of the failure, which was attributed partly to excessive demand for road and garden watering, and partly to the bursting of the main. He was inquiring into the capacity of the Company to meet the demands upon it. On an application by twenty householders the Local Government Board were empowered to appoint a special inquiry into such matters.

Army Veterinary Surgeons.

Major O'Beirne asked the Secretary of State for War whether the War Office authorities, when they decided to make no alteration in the Veterinary Warrant of 1878 in favour of those veterinary surgeons who entered the Service under the conditions of the Warrant of 1859, had considered the fact that these officers, under the Warrant of 1859, were eligible for promotion to rank of captain after five years' service, but are now only eligible after twelve years' service, whilst riding masters and quartermasters are promoted to that rank after ten years' service.—Mr. Childers replied that there was a great difference between being eligible and being entitled to promotion. The whole arrangement as to veterinary surgeons having been so recently settled by his predecessor, he would not re-open the question this year, but would look into the matter during the autumn.

Irish Prisoner.

Mr. T. D. Sullivan asked whether Mr. James Higgins, a suspect imprisoned in Galway Gaol, was suffering from dangerous disease of the heart.—Mr. Forster said he had telegraphed for further information. He was at present informed by the medical officer that Mr. Higgins was suffering from excited action of the heart, but the disease was not caused or aggravated by confinement, and was not likely to prove dangerous.

GLASGOW.

(From our own Correspondent.)

A TOPIC fraught with tragic interest to more than one of the lecturers in our extra-mural schools has again been under discussion—I refer to the proposal to amalgamate the Andersonian Medical School with that attached to the Royal Infirmary. A conference of lecturers and others concerned, belonging to the two schools, was held a fortnight ago, but no definite basis of agreement could be arrived at; the matter, however, is in the meantime left in the hands of a committee of six, consisting of three directors from each institution. No one can doubt that such a consummation as the union of these two schools is highly desirable from every point of view, but the difficulties which must first be overcome are so numerous that I doubt whether the wished-for amalgamation can take place; it is hardly in human nature that teachers should be very ready to give up appointments they have had some difficulty in obtaining. It can scarcely be said, even by its best friends, that the Royal Infirmary School has been a very pronounced success, if judged, at least, by the number of students in attendance; its directors, nevertheless, in providing new and more suitable buildings, class-rooms, &c., at an estimated cost of £10,000 (half of this sum being already subscribed), have shown a degree of enterprise which is almost startling. Anderson's College, on the other hand, though in a highly prosperous condition, the number of its medical students having increased by more than 50 per cent. during the last four sessions, is much hampered by unsuitable and insufficient accommodation, and would therefore gain much in this respect by union with the Royal Infirmary. It would thus be much to the advantage of both institutions that there should be but one strong extra-mural school, located in convenient premises, near the wards of the Infirmary. And further, while the directors of the Infirmary would, for obvious reasons, welcome the change, it is thought that the trustees of Anderson's College would not be sorry to part with their medical school, as it interferes somewhat with the popular mission of the college. It is not improbable that, should the negotiations for amalgamation fall through, the Andersonian school will move westward, where it would come into more direct competition with the medical school of Glasgow University. This, however, would have the effect of adding to the overcrowding of the wards of the Western Infirmary, while much less use would then be made of the magnificent store of teaching material to be found in the Royal Infirmary.

The difficulties which beset the working of the Sale of Food and Drugs Act (1875) have lately been still further made manifest in an appeal case which came before the High Court of Justiciary in Edinburgh. A farmer had been convicted in the Airdrie Sheriff Court of having sold butter-milk which contained thirty-nine per cent. of added water; his appeal to the Lords of Session, however, was sustained, and the Court granted him expenses. In the course of the prosecution, the official analyst held that twenty per cent. of water was a sufficient quantity to add in the process of churning; but against this view had to be put the evidence of several farmers to the effect that it was all a question of temperature—that as this varied, thirty, forty, or even fifty per cent. of water might have to be employed. The question was thus regarded as one of theory *versus* practice. In quashing the decision of the Lower Court, Lord Young asked whether, in the event of a hotel-keeper supplying soup with too much water and too little stock, his customers could prosecute him. One constantly got very poor soup in hotels, and he would like to know whether there could be a remedy by going back upon the hotel-keeper. He had no hesitation in saying that this prosecution ought never to have been instituted; and he further described adulteration as the addition of some unwholesome ingredient for the purpose of cheating, by inducing the purchaser to pay a larger price for the article than it was worth.

IRELAND.

(From our own Correspondent.)

THE College of Physicians in Ireland have passed resolutions in reference to evidence to be submitted on behalf of the College to the Royal Commission on the Medical Acts. They consider that legislation should be based upon the following—viz., that no person should be allowed to hold a public appointment until he has passed a public examination conducted under the authority of the Government; and that no candidate be admitted to such examination without the production of diplomas in medicine, surgery, and midwifery, from properly authorised bodies.

I recently stated that another candidate besides Mr. Wheeler would probably come forward for the Vice-presidency of the Royal College of Surgeons in Ireland; and this has now been verified by the fact that Mr. William Stokes, Surgeon to the Richmond Hospital, and Lecturer on Surgery in the College of Surgeons, has signified his intention to be a candidate for that office next year.

It appears from the recently issued report of Irish Lunatic

Asylums for the past year, that there has been an increase of 232 in the number of insane over that of the preceding year. During the year 2366 patients were admitted into district asylums; 1925 were cases of a first attack and 441 of relapses, the comparatively large number of the latter indicating a marked difference between the liability of a recurrence of disease in mental and physical affections. Of the 11,033 under treatment in district asylums, 1001 were sent out recovered, 302 were improved, and 72 unimproved. The mortality amounted to 808, being equal to a death-rate of nearly 7¼ on the entire number in asylums, as compared with 8¾ in 1879. Three deaths from suicide were recorded, but no fatality occurred from personal assaults among the patients. On the 1st of last January there were in Irish workhouses 3573 persons more or less insane, being 82 more than at the corresponding date of 1880. During the year 160 were handed over to district asylums as violent and acute cases, and as being likely to benefit by treatment in those institutions. With reference to a statute passed two sessions back, and from which much good was expected by its promoters—"The Inebriate Bill"—the inspectors cannot form any opinion whatever of its merits, not a single application having been made to them under its provisions by male or female for admission into hospital on the plea of a gratuitous self-imprisonment, however extensive the necessity and beneficial the contingent results.

During the past year 187 patients died in the Cork-street Fever Hospital, Dublin, being equal to a death-rate of 14·96 per cent. In 1877–78 the rate was 9·49 per cent., in 1878–79 it rose to 20·78 in consequence of a severe epidemic of small-pox, and in 1879–80 it declined to 17·58. The fall in the mortality last year, as compared with the previous, is the more remarkable as the death-rate from small-pox increased from 19·8 per cent. in 1879–80 to 21·4, while that from typhus rose from 9·5 to 10·7, and that from enteric fever increased from 10·8 to 12·7 per cent. The expenditure amounted to £6120, of which £2000 was obtained from the Parliamentary grant.

During the past year the number of separate cases treated at the Belfast Hospital for Skin Diseases amounted to 1080, which was the largest number any year since the institution was established some sixteen years since. The Committee draw attention to the form of bequest appended to the Annual Report, in the belief that the hospital has now proved itself worthy to be enrolled amongst the number of those institutions which commonly participate in that form of benefaction.

By the Supplemental Rules under the Supreme Court of Judicature Act (Ireland) 1877, made on the 2nd inst., the fees for medical men as witnesses, if resident within five miles of place of trial, or ten miles if there is a railway for three-fourths the distance, have been fixed at a sum not exceeding one guinea per day; and if beyond that distance not exceeding three guineas per day. This scale includes the board and lodging of the witnesses, but does not include reasonable travelling expenses actually paid, which may be allowed in addition.

The Cookstown Board of Guardians have applied to the Local Government Board for a loan of £7000 for the purpose of obtaining a water-supply for that town. A local inquiry, under Sec. 23 of the Public Health Act, 1878, will be necessary before the Local Government Board can sanction the proposed loan.

Colonel Montgomery has given £2000 to the Down County Infirmary, and the grand jury last week passed a vote of thanks for the gift.

PARIS.

(From our own Correspondent.)

DURING the last week the heat in Paris has been extreme. On Friday, the 15th of July, 37·8° Centigrade was recorded by M. Renou at the observatory of St. Maur, and at other points in the capital and suburbs it was a fraction of a degree higher. Similar temperatures have been experienced in the provinces. At Nantes and at Cette, as in Paris, the maximum shade reading has been 38° Centigrade, or 100·4° F., at Nancy 39°, or 102·2° F., and at Cape Béarn it has even attained as much as 40° Centigade, or 104° F. M. Renou states that these temperatures are the highest that have ever been authentically recorded in France. In August, 1704, Cassini noted 40° for the atmosphere with an instrument, which gave the same reading for the human body; and in 1763, 39° and 40° were again recorded, but these readings were manifestly erroneous, and corresponded probably to 31° and 32°. Cases of sunstroke are, of course, very numerous; and those which terminate fatally average, according to the newspapers, about three a day. What may be the effect of the heat upon the general mortality is difficult to anticipate; but it is scarcely susceptible of increase without reaching alarming proportions. The last weekly *Bulletin de Statistique Municipale* recorded 1125 deaths, which is equivalent to an annual death-rate of 29·6 per thousand; and now an official announcement has been made that there is every likelihood of a failure of the water-supply. It is remarkable that every vicissitude of the weather finds the municipal authorities entirely unprepared to grapple with the difficulty. In the severe winter of 1879–80 they were helpless before the snow; and the accumulation of refuse matter in the gutters and drains was set down as one of the causes of the horrible stenches which reigned during the ensuing summer. Now an exceptional elevation of temperature is sufficient to paralyse the supply of water; and unless it should chance to rain, there will be no means apparently of preventing the occurrence of an epidemic.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen passed the Second Examination for the Licence (Anatomy and Physiology) on July 11th and subsequent days:—

Colman, Harry.
Druitt, Arthur Barthold.
Kerkham, Fredk. William.
Oram, Percy Sprague.
Soden, T. Armand Bourne.
Williams, Fred. Newton.

[The name "Obadiah Johnson" should have been omitted from the list published last week of successful candidates at the First Examination.]

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Tuesday last:—

Allan, Robert John, Scarborough.
Birt, Cecil, Stourbridge.
Blore, Isaac, Manchester.
Bush, James Paul, Bristol.
De Lom, Henry Anthony, M.B. Toronto, Mitchell, Canada.
Dupuis, Thomas Robinson, M.D., Kingston, Canada.
Hodgson, Robert Hugh, Clapham.
Holdsworth, Arthur Thomas, Birmingham.
Kirkpatrick, Roger, M.B. Edin., Edinburgh.
Meyers, Herbert Henry, L.R.C.P. Edin., East Dulwich.
Odling, Alfred Edward, L.S.A., Wendover.
Phillips, Henry Whitby, M.B. Edin., Atherstone, Warwickshire.
Robinson, Frederick Gardner, Manchester.
Ward, Edward, Horbury, York.

The following gentlemen were admitted Members on Wednesday last:—

Austen, Henry Hinds, M.B. Durham, Burnt Ash-hill, Lee.
Bird, Ashley, L.S.A., Clifton, Bristol.
Brown, J. W. Henry, Leeds.
Chappell, Walter Franklin, M.B., Toronto.
Cook, Philip Inkermann, Brixton.
Crookshank, Edgar March, Belsize-park-terrace.
Deeble, W. B. Chatterton, Netley, Southampton.
Ellison, John Clement, Brisbane, Queensland.
Gilbert, Harry Pearson, L.R.C.P. Edin., South Water, Sussex.
Kilham, Charles Speight, L.S.A., Sheffield.
Laimbeer, Frederick James, L.R.C.P. Lond., Liverpool.
Orr, William Young, M.B. Edin., Elgin, N.B.
Robinson, William, M.B. Durham, Stanhope, Durham.
Rogerson, John Thomas, Manchester.
Sewart, John Hunter, L.R.C.P. Edin., Barton, Westmoreland.
Stacey, Herbert Gleeson, L.S.A., Leeds.
Walters, William, Manchester.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 14th inst.:—

Evan T. David, London Hospital; Charles Titley, Guy's Hospital; Herbert Parker, St. Bartholomew's Hospital; Richard T. Finch, Cambridge and St. George's Hospital; Arthur E. Dodson, Charing-cross Hospital; William Ellis, St. George's Hospital; Walter R. Tuckett, London Hospital; Arthur A. Woodson, University College; Charles S. Spong, Richard T. Westbrook, and David T. Lewis, Guy's Hospital; Martin S. Whish, Frederick S. Turner, and John Bell, University College; James N. Anwyl, St. Bartholomew's Hospital; Gerald C. Hawkins, St. George's Hospital; William H. Maling, King's College and Newcastle-on-Tyne; Hugh Webb, St. George's Hospital.

Of the 202 candidates examined during the past fortnight, 71 failed to satisfy the Board of Examiners, and were re-

ferred for three months' and 15 candidates for six months' further anatomical and physiological study.

THE David Manson Memorial Hospital at Takow, China, is now completed, and the patients have been transferred to it from the old building.

THE Library of the Obstetrical Society of London will be closed during the month of August.

AN attempt to establish a Parochial Dispensary in the Plymouth Union, similar to those existing in Oxford, Reading, and Southampton, has failed.

AT the Cork Assizes on Wednesday, John Kellegher, a pauper inmate of Cork workhouse, was sentenced to five years' penal servitude for a murderous assault with a poker on Dr. Wall, the visiting physician.

ON the 14th inst. the corner-stone of the new Dewsbury Infirmary was laid by Sir Henry Edwards, Bart., in the presence of a large assemblage of notabilities. The occasion was celebrated as a general holiday in the town and neighbourhood, and the institution is expected to prove a great boon to the inhabitants, of whom a large number are employed in mills. The cost of the building and accessories is estimated at £14,000, half of which sum has been raised by the Infirmary Board.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly Court of Directors of this Society was held at 53, Berners-street, on Wednesday last, at 5 P.M., the President, Sir George Burrows, in the chair. A sum of £1302 was voted to the sixty-one widows and twelve orphans now on the list of recipients of grants. The expenses of the quarter were £41 14s. One fresh application was made by a widow for a grant and her claim was admitted. Two orphans ceased to be eligible through age for any further assistance. One new member was elected, and the death of three reported. It was resolved at the meeting to send a circular to all the medical men residing in the area comprised between the old and new limits of the Society, now extended to an area of all places within twenty miles of Charing-cross.

STATISTICAL SOCIETY.—The following is the list of Council and Officers for the year 1881–82. President: James Caird, C.B., F.R.S. Council: Arthur H. Bailey, F.I.A.; T. Graham Balfour, M.D., F.R.S.; Alfred Edward Bateman; G. Phillips Bevan; Stephen Bourne; Sir George Campbell, K.C.S.I., M.P.; J. Oldfield Chadwick, F.R.G.S.; Hammond Chubb, B.A.; Hyde Clarke; Right Hon. the Earl of Dunraven, K.P.; Robert Giffen; Rowland Hamilton; Frederick Hendriks; Noel A. Humphreys; Robert Lawson; Professor Leone Levi, LL.D.; Sir J. Lubbock, Bart., M.P., F.R.S.; John B. Martin, M.A.; Richard Biddulph Martin, M.P.; Frederic John Mouat, M.D., F.R.C.S.; Francis G. P. Neison; Evan C. Nepean; George Palmer, M.P.; Robert Hogarth Patterson; Henry D. Pochin; Frederick Purdy; Sir W. Rose Robinson, K.C.S.I.; Thomas A. Welton; Cornelius Walford, F.I.A.; R. Price Williams, C.E. Treasurer: Richard Biddulph Martin, M.P. Secretaries: Hammond Chubb, Robert Giffen, John B. Martin. Foreign Secretary: F. J. Mouat, M.D.

FORFARSHIRE MEDICAL ASSOCIATION.—The twenty-third annual meeting of this Association was held in the Council Chambers, Montrose, on the 14th inst. Dr. Andrew Key, President, in the chair. The following gentlemen were elected office-bearers for the ensuing year, viz.:—President: Dr. Lawrence (Brechin). Vice-Presidents: Dr. Mackie, sen. (Brechin) and Dr. Pirie (Dundee). Secretary: Dr. Sinclair (Dundee). Treasurer: Dr. MacEwan (Dundee). Council: Drs. A. James Duncan, Anderson, Charles Moon, Macleod, Steven, and Steel Moon (Dundee). Local Secretaries: Dr. Dewar (Arbroath), Dr. Lawrence (Montrose), Dr. Mackie, jun. (Brechin), Dr. Alexander (Forfar). A paper was read by the President on "Points of Resemblance between Typhoid Fever and Diphtheria." Dr. Johnston, of Kair, then read a report of a case of Obturator Hernia; after which a discussion arose on the report of the committee appointed at the last meeting to consider the question raised by Dr. Miller's paper on the "Hygiene of the Infectious Fevers." The result was that the committee were asked to continue their investigations. The consideration of the question of fees was deferred till next year. In the evening the members of the Association dined together at the Star Hotel.

THE INTERNATIONAL MEDICAL CONGRESS.

THE following is the daily programme, complete up to our going to press:—

Tuesday, Aug. 2nd.

10 A.M. to 6 P.M.: Registration of Members.
3 to 6 P.M.: Informal Reception at the College of Physicians.
9.30 P.M.: Conversazione given by President of Odontological Society.

Wednesday, Aug. 3rd.

11 A.M.: General Meeting at St. James's Hall; Chairman Sir William Jenner. Inaugural Address by Sir James Paget.
3 P.M.: Meeting of the Sections.
4 to 7 P.M.: Musical Promenade in Royal Botanic Society's Gardens.
4.30 P.M.: General Meeting. Address by Professor Virchow.
9.30 P.M.: Conversazione at South Kensington Museum.

Thursday, Aug. 4th.

10 A.M. to 1 P.M.: Meetings of Sections.
1.30 P.M.: Visits to Hospitals.
2 P.M.: Meetings of Sections.
4 P.M.: General Meeting. Reading of the late Professor Raynaud's Address by his friend Dr. Fércol.
6.30 P.M.: Banquet given by the Lord Mayor at the Mansion House.

Friday, Aug. 5th.

10 A.M. to 1 P.M.: Meetings of Sections.
12.45 P.M.: Visit to Mr. Penn's Works at Greenwich.
1.30 P.M.: Visits to Hospitals.
2 P.M.: Meetings of Sections.
4 P.M.: General Meeting. Address by Dr. Billings.
8 P.M.: Conversazione at the Guildhall.

Saturday, Aug. 6th.

10 A.M. to 1 P.M.: Meetings of Sections.
12.15 P.M.: Excursion to Croydon Sewage Farm.
1.45 P.M.: Excursion to Folkestone—Unveiling of Harvey Memorial Statue.
2 P.M.: Excursion to Hampton Court, and Garden Party at Normansfield, given by Dr. Langdon Down.
4 to 7 P.M.: Reception at Kew Gardens by Sir J. D. Hooker. Garden Party at Hampstead, given by Mr. and Mrs. Spencer Wells. Garden Party at Wimbledon, given by Mr. and Mrs. Saunders.
6.30 P.M.: Dinner at Richmond, given by the United Hospitals Club. Reception by the Foreign Secretary to the Foreign Members of the Congress.

Sunday, Aug. 7th.

10 A.M.: Full Choral Service and Sermon in Westminster Abbey.
3.15 P.M.: Full Choral Service, and Sermon by Canon Liddon, in St. Paul's Cathedral.
1.30 P.M.: Excursion to Boxhill.
The Gardens of the Royal Botanic Society, Zoological Society, and at Kew and Hampton Court, will be open to Members of the Congress.

Monday, Aug. 8th.

10 A.M. to 1 P.M.: Meetings of the Sections.
11 A.M.: Visit to the Docks.
2 P.M.: Meetings of Sections.
4 P.M.: General Meeting. Address by Professor Volkmann.
6.30 P.M.: Dinner given by the Master and Wardens of the Society of Apothecaries.
9.30 P.M.: Conversazione given by the Royal College of Surgeons.

Tuesday, Aug. 9th.

10 A.M. to 1 P.M.: Meetings of Sections.
2 P.M.: General Meeting. Address by Professor Huxley.
4 P.M.: Visit to the Crystal Palace; informal Dinner, and Display of Fountains and Fireworks &c.

During the week of the Congress Messrs. Spiers and Pond will set apart for members their Victoria banqueting room for a lunch at 2s. 6d. per head from 1 to 3 P.M., and for dinners and other refreshment at all hours. The Café Monico will provide a luncheon for 1s. 6d.

The General Meetings will all be held in St. James's Hall; the Sections meet in the University of London, Burlington House, the Royal Institution, the Asiatic Society's Rooms, and the Royal School of Mines; the various Offices of the Congress are in the Rooms of the Royal College of Physicians, Pall Mall East.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BLYTH, W. F., L.R.C.P., L.R.C.S.Ed., has been appointed Resident Assistant Medical Officer to the Workhouse of the Sheffield Union.

BOWES, J. L., M.R.C.S., has been appointed Medical Superintendent of the Wilts County Asylum, vice E. M. Cooke, M.B.Lond., resigned.

CHEETHAM, W. H., M.B.Dur., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Wharfedale Union.

CLAPHAM, L., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Thorney District of the Peterborough Union.

CRAINE, R. E., L.F.P.S.Glas., has been appointed Medical Officer and Public Vaccinator for the District of Charlestown and Lime-Kilns, Fifeshire.

DAVIES, D., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Stapleton Urban Sanitary District.

DENHAM, J. K., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Donnybrook Dispensary.

EVANS, A. O., L.R.C.P.Lond., M.R.C.S., has been appointed House-Surgeon to the Dewsbury and District General Infirmary, vice Bennett, resigned.

HUNT, L. G., M.D., L.R.C.P., L.F.P.S.Glas., has been appointed Medical Officer to the Workhouse of the Sheffield Union.

HUTCHINSON, R. J., M.D., C.M.Edin., has been appointed Medical Officer to the Second Cockermouth District of the Cockermouth Union.

JACKSON, M., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Second District of the Croydon Union.

KEEN, E., M.R.C.S. &c., has been appointed Acting Dental Surgeon to the Great Northern Hospital.

MACKAY, J. C., L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer to the Workhouse of the St. Columb Major Union.

MADELEY, D. E., has been appointed Medical Officer to the Chesterfield Friendly Societies' Medical Aid Association, vice Robinson, resigned.

PHILLIPS, W. F., L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer for the St. Mary Bourne District of the Whitchurch Union.

POWELL, G. B., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.Dub., has been appointed Medical Officer to No. 3 District of the Nottingham Union.

PRICHARD, R. M., M.D., has been appointed Medical Officer of Health to the Ruthin Union Rural Sanitary Authority.

REYNOLDS, H. D., L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Pembroke, vice Saer, deceased.

ROPER, E., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer for the Shepperton District of the Staines Union.

SHIRTLIFF, E. M., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer for the Ham District of the Kingston Union.

SIMONS, G. M., M.R.C.S., has been appointed Medical Officer for the Kingskerswell District of the Newton Union, Devon.

THOMAS, J. R., M.B.Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Llanelly Rural Sanitary District.

TINDALE, W. R., M.B., C.M.Aber., L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer for the New Hampton District of the Kingston Union.

WILLIAMS, F. M., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer of Health to the Dunmow Rural Sanitary Authority.

Births, Marriages, and Deaths.

BIRTHS.

ARCHIBALD.—On the 20th inst., at Lynton House, Brixton-rise, London, S.W., the wife of John Archibald, M.B., C.M., L.R.C.P.E., of a son.

RENDALL.—On the 14th inst., at Maiden Newton, Dorsetshire, the wife of William Rendall, M.R.C.S.Eng., of a son.

HILL.—On the 14th inst., at Wimpole-street, the wife of Mr. Berkeley Hill, F.R.C.S., of a daughter.

MYERS.—On the 17th inst., at Instow, North Devon, the wife of Arthur B. R. Myers, Surgeon, Coldstream Guards, of a daughter.

RAPER.—On the 12th inst., at Great Wakering, Essex, the wife of W. A. Raper, M.D., of a son.

RIORDAN.—On the 3rd inst., at Ivy Bank Villa, Gravesend the wife of Surgeon-Major W. E. Riordan, Army Medical Department, of a son.

MARRIAGES.

GRIMWOOD—APPLEBY.—On the 13th inst., at Platt Church, Rusholme, Manchester, Harry Charles Grimwood, M.R.C.S.Eng., of Pontefract, Yorkshire, to Harriette, eldest daughter of Frederick Appleby, C.E., of Rusholme, Manchester.

HARTT—PERRY.—At the Parish Church, Bridgham, Norfolk, by the Rev. J. Wilkinson, M.A., Charles Henry Hartt L.R.C.S.I., L.K.Q.C.P.I., L.M., of 9, Romney-terrace, Greenwich, to Katherine Eleanor, younger daughter of the late George Perry, Esq., Fellow of the Royal College of Surgeons, of Kilmeague, co. Kildare, Ireland.

WAUGH—BROWNING.—On the 12th inst., at St. Mary's Church, Abergavenny, John Waugh, M.B., M.Ch. T.C.D., of Toddington, Beds, to Lily Lavinia, second daughter of the late J. Drowning, Esq., of Abergavenny.

WRIGHT—EDGELL.—On the 7th inst., at Rodden, Somerset, by the Rev. E. B. Edgell, Rector of Bromham, Wilts, and the Rev. M. S. Edgell, Vicar of Swanley, Kent, George Arthur Wright, M.B.Oxon., F.R.C.S., of Manchester, second son of the Rev. H. E. Wright, Rector of Vange, Essex, to Maria Elizabeth, eldest daughter of the Rev. C. W. Edgell, Rector of Rodden, Frome, Somerset.

DEATHS.

FLEMING.—On the 13th inst., at South Lodge, Champion-hill, London J. N. Fleming, M.D.Edin., aged 33.

POLLOCK.—On the 5th inst., at Rose-hill Cottage, Hornsey, Margaret wife of T. Pollock, M.D., aged 77.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 21st, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 15	30·08	S.W.	78	69	123	98	61	..	Hazy
,, 16	30·10	W.	71	65	112	85	63	..	Cloudy
,, 17	30·18	N.E.	74	66	113	87	61	..	Cloudy
,, 18	30·01	W.	74	64	119	91	61	..	Bright
,, 19	29·90	W.	74	67	118	90	64	..	Overcast
,, 20	29·85	N.E.	61	59	109	75	59	..	Overcast
,, 21	30·07	E.	60	52	103	73	53	..	Fine

Medical Diary for the ensuing Week.

Monday, July 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

UNIVERSITY COLLEGE HOSPITAL.—Ophthalmic Department.—2 P.M., and on Tuesday, Thursday, and Friday, at the same hour.

Tuesday, July 26.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, July 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, July 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, July 29.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 30.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

AT the final examination for the diploma of Membership of the above College, which was commenced on Friday last, 217 candidates presented themselves, to whom the following questions on surgical anatomy and the principles and practice of surgery were submitted, when they were required to answer at least four, including one of the first two, out of the six questions:—

1. Describe the course and anastomoses of the arteries as seen in a dissection of the scalp.
2. Mention the structures that must be removed to expose the whole exterior surface of the synovial membrane of the knee-joint.
3. Describe the pathological changes which occur in the several tissues of a joint, say of the hip, in the course of destructive inflammation.
4. What do you understand by the terms recurrent and secondary hæmorrhage? To what causes may each kind of hæmorrhage be due?
5. Under what circumstances may paracentesis thoracis be required? Mention the different operations, and give your reasons for selection.
6. Mention the various defects of sight which may be corrected by the use of glasses. Describe, briefly, the structural peculiarities which produce these several defects, and the kind of glasses appropriate to each case.

The following were the questions on the principles and practice of medicine:—

1. Discuss the symptoms, signs, and consequences of aneurism of the aortic arch.
2. Describe the symptoms of renal, hepatic, and intestinal colic respectively; state the causes to which these affections are generally due; and show how they may be distinguished one from another.
3. Name the vegetable astringents of the Pharmacopœia; state their several characteristic medicinal qualities and special uses; and give the doses of their more important preparations.

L.R.C.P. (Newcastle) is referred to the article on Books in our Students' Number, published on September 12th last.

CHEMISTS *v.* GROCERS.

To the Editor of THE LANCET.

SIR,—In the small town of Frome, Somersetshire, the chemists have felt and expressed their indignation towards a grocer for selling patent medicines. The chemists being so jealous over their own rights, how is it, I would ask, they are not equally so over the rights of others, and why do not the medical profession exhibit equal jealousy over the illegal practice of the chemist? In this town of Frome an enormous prescribing trade is carried on by the chemists; one firm alone does more over the counter and in the consulting-room in one day than all the properly qualified medical men of the place do in a week. The medical practitioner has to sit quietly by and see himself robbed because it is not professional or dignified in him to give such cheap advice or keep a shop, and so at the end of the year the till of the chemist is running over, but the poor doctor finds himself without the wherewithal to live. What benefit has registration been to the profession? It has done nothing but take fees out of our already too bare pockets without giving us the slightest protection. The chemist or any other party can give advice as long as he does not assume any title or death does not take place under his treatment. This he is careful to avoid, as a properly qualified man is recommended before such takes place. If a medical man in the present day wants to make an independency or even a living for his family, he must put pride in his pocket and have an open surgery—in plain words, a chemist's shop.

I am, Sir, yours truly,

July 18th, 1881. FAIRPLAY

MEDICAL REUNIONS.

THE *New York Medical Record* offers some criticisms on the annual meeting of the Iowa State Medical Society, which go to show that in the New World gatherings of the kind exhibit the objectionable features which to a large extent characterise them in the Old. "Iowa is a great State," says our contemporary; "it has many physicians whom the local press hospitably designate as its 'Life-preservers.' But they seem to be utterly ignorant of such a thing as medical science, or of the object of medical organisations. We beg, therefore, to remind our esteemed brethren of the State in question that they who study only the art of medicine have no claim to be called members of a learned profession. It is largely to encourage scientific knowledge that societies are organised. But our Iowa 'Life-preservers' seem to have united mainly for the propagation of rides on the river, and for the perpetuation of elegant receptions, where the medical mind shall relax its tension and grow giddy beneath the smiles of Iowa's daughters."

Mr. Berridge.—Next week, if possible.

R. C. Kibble, M.D., Surg.-Major 1st Royal Tower Hamlets Militia (Dalston).—We altogether disagree with our correspondent's view of the subject of the ambulance station, and he will change his opinion, we think, when he becomes more familiar with its arrangement and working. He may rest assured that one case of small-pox retained in any of the houses of the districts will be an infinitely greater source of danger.

Spes.—Parkes's "Practical Hygiene," published by Messrs. J. and A. Churchill.

Diagnosis.—The idea seems to be wanting in practicability. The search for mechanical means of diagnosis may, we think, become too eager, since it tends to discourage the use of the power of observation, on which our forefathers chiefly relied to obtain results that can scarcely be excelled in our day even with the aid of modern contrivances.

SWALLOWING A MARBLE: SOLID DIET TREATMENT.

To the Editor of THE LANCET.

SIR,—Seeing Mr. Merry's case of the above in your issue of July 9th, I beg to say I had a similar case about a month ago in a boy aged four years. The parents expected I would give a purgative, but I ordered nothing but "solid dry diet" for twenty-four hours, after which I gave a brisk cathartic, and had the satisfaction of finding the marble (a good-sized one) imbedded in a mass of fæces.

I am, Sir, yours faithfully,

C. H. COX, L.K.Q.C.P. & L.R.C.S.I.

Cottenham, Cambs, July, 1881.

TREATMENT OF COMPLICATIONS AFTER TRACHEOTOMY.

To the Editor of THE LANCET.

SIR,—It seems desirable, in reference to the case of Dr. Lowson, who suffered so severely as the result of sucking diphtheritic membrane from the trachea of a patient after tracheotomy, to consider the dangers to which medical men are exposed in the operation, and what means are available for avoiding them. Some years ago I had a syringe made for the withdrawal of membrane or blood from the trachea. Unfortunately since having had the instrument made I have not had it at hand on the three occasions when I could have tested its use. The nozzle of the syringe is conical, so that it can be fitted to any sized tracheotomy cannula. I am now having a syringe made to which different sized nozzles can be adapted; for a syringe to be of the greatest service in the removal of blood, and often clots or membrane from the trachea, it is necessary that the aperture of the nozzle should be nearly equal in size to the calibre of the cannula.

In the event of uncontrollable hæmorrhage into the trachea, a syringe would, I should say, be of little avail, for suction through the tracheotomy tube has, as a rule, to be made not once, twice, or thrice, but successively many times, perhaps for an hour or more. The syringe after a short time would most likely become clogged with blood, and would then be useless. It might perhaps be possible to wash out the syringe with water during the time taken up by each inspiration of the patient.

I think in cases of hæmorrhage that the adaptation of Trendelenburg's tampon cannula to Durham's right-angled tube will be the instrument found most serviceable. With the india-rubber bag of the tampon cannula distended, blood is prevented from passing down the trachea. The syringe might be of use after the tampon cannula is adjusted to assist in withdrawing the blood which has already passed down into the bronchi. It must be borne in mind that the india-rubber bag of this cannula requires periodically renewing, and unless in good order will burst on inflation. The objection to the use of such instruments is that they are not likely to be at hand when required, and it must be remembered that it is always in cases of emergency that they are wanted.

Having had some experience in the management of these serious, but fortunately infrequent, after-complications of tracheotomy, it seems to me very desirable to draw attention to the means which offer the best solution of these difficulties.

I remain, Sir, yours faithfully,

Devonshire-street, Portland-place, W., W. PUGIN THORNTON

July 14th, 1881.

THE PARIS HOSPITALS.

A FRENCH contemporary states that the number of applications for admission to the Paris hospitals is just now very considerable. The prevailing disorders are fevers and small-pox. It has been found necessary to place as many as ten hammocks in some of the wards till the other beds become vacant either by the cure or the death of the patients occupying them. Thus, although there are numerous hospitals in Paris, they no longer suffice for the needs of the population. There is a talk of building two more. The following is a list of those which exist at present, with the number of patients they can properly accommodate:—1, Beaujon, with 417 beds; 2, Charité, 467; 3, Cochin, 197; 4, Enfants Malades, 698; 5, Hôtel Dieu, 839; 6, Lariboisière, 606; 7, Laennec, 509; 8, Lourcine, 276; 9, Maternité, 300; 10, Midi, 336; 11, Necker, 449; 12, Pitié, 737; 13, Saint-Antoine, 606; 14, Trousseau, 405; 15, Tenon, 730; 16, Saint Louis, 822.—Total number of beds, 8360. Besides these there are numerous asylums. There are likewise three hospitals for the military population, with accommodation for more than 2000 patients.

A Young Practitioner is referred to the article on Books in our Students Number.

Mr. William Campbell.—We can only afford room for a discussion of the subject in its purely medical aspect.

Mr. Geo. Bartholomew.—We cannot exchange.

Dr. Williams.—We understand it will be quite impossible to admit all the fellows and members of the College of Surgeons to the conversazione to be given to the members of the International Medical Congress, unless they are members of that body.

THE NOTIFICATION OF DISEASES.

THE *Local Government Chronicle* has the following observations on the notification of diseases:—

"Pending any general legislation making the notification of infectious diseases compulsory, much may be done in this direction by the voluntary action of sanitary authorities and medical practitioners. More than one sanitary authority has adopted the practice of paying fees to medical men for certificates, similar to those required to be given under the Local Acts which provide for compulsory notification of these diseases. From a report of their proceedings, which we print in another column, it will be seen that the Dorking Local Board, at the suggestion of their medical officer, Dr. Jacob, have resolved to pay a fee to any medical practitioner who furnishes them with the earliest information of the first case in any house within their district of small-pox, typhoid, or any other infectious disease of a like character. However imperfect the returns may be where the duty of making them is not imposed by law, they are likely, so far as they go, to be of service in enabling the authority to arrest the spread of the disease; and the general adoption of arrangements of this kind, if they prove a success, may be expected to pave the way for general legislation on the subject. It is, however, perhaps to be regretted that the fee offered in the above case, and also in that in which it was cited as a precedent, is only one shilling. In the great majority of cases under Local Acts, the fee is half-a-crown; and as it is doubly desirable, where the information is to be obtained voluntarily, to obtain the ready co-operation of the medical profession, it would, we think, have been wiser to have adopted the usual scale of payment."

"ON HOSPITALS."

To the Editor of THE LANCET.

SIR,—Will you allow me to draw your attention to a slight inaccuracy in the paper of Dr. Frederic Mouat, published in your issue of this date, under the above heading. The number of beds is there stated to be 335; it should be 351.—I am, Sir, your obedient servant,

C. TODD, Secretary.

St. George's Hospital, Hyde-park-corner, S.W., July 16th, 1881.

"'THE LANCET' INQUIRY UPON SCHOOL MANAGEMENT AND HYGIENE."

To the Editor of THE LANCET.

SIR,—Your deeply interesting article on the above subject will do much for the cause of education. I have for many years tried to persuade the principals of schools that a medical supervision is necessary, both morally and physically; yet we daily see advertisements announcing that "no doctor has visited the advertiser's school for years." The principal medical men in this town have, without payment, constantly visited my schools, and entered carefully into all the details of domestic management, advising with respect to diet, hours of study, &c. Were it not for their unfailing devotion, our town would never have held the high educational position it now boasts. If the principals of schools would agree to a regulated medical supervision the doctors would, in their grand unselfishness, gladly visit; but it is not right that we should take their valuable time, therefore it would be better if a fee could be fixed. We are obliged to pay our rent and masters, and yet the doctors, to whom we all go in trouble and sickness, have in many cases neither honour nor payment.—I am, Sir, yours very obediently,

Kent, July 15th, 1881. S. A. S.

Atrides.—We must confess to a feeling of surprise that the duties of a district Poor-law medical officer should have been undertaken without the holder of the post having first made himself acquainted with the nature of those duties and his relations to the relieving officer. Our correspondent, if he had inquired even of the clerk to the guardians, would have quickly been given to understand that he has no power to order meat and other necessaries for the pauper sick. On this subject Glen says: "A medical officer is not empowered by the Orders of the Poor-law Board to order food or articles of diet, as meat, milk, wine, or porter for his pauper patients. Any direction that he may give to that effect only amounts to an expression of opinion on his part that relief in food or other necessaries is required. The power of granting relief rests with the guardians, and in cases of sudden and urgent necessity with the relieving officer; and any certificate given by the medical officer for the allowance of extra nourishment to any of his patients can only be regarded as a recommendation or statement of his opinion as to what is required. If the certificate were to be taken in any other sense, it would have the effect of constituting the medical officer the absolute judge, not only of the kind of relief to be afforded, but also of the ability of the patient to provide it out of his own resources, which is entirely for the guardians' consideration, in whom the discretion of giving or withholding relief of every kind is vested by law."—Glen's "The General Consolidated and other Orders of the Poor-law Commissioners, &c." Sixth Edition, p. 155.

A Provincial Fellow.—There are now on the Council of the Royal College of Surgeons the following provincial surgeons:—Dr. Humphry, Cambridge; Mr. Baker, Birmingham; Mr. Lund, Manchester; Mr. Cadge, Norwich.

Mr. Wm. F. Blyth (Sheffield).—It is a legal question we do not remember to have seen raised. The guardians generally instruct the workhouse officer to certify. Nevertheless we think the course taken by the magistrate is right in principle. The medical officer is not an impartial person. He may *wish* to get rid of a troublesome pauper. We must face the facts.

F. D. should possess himself of an elementary work on Physiology.

Dr. Milnor Fothergill.—Soon.

Dr. Althaus.—The paper is marked for insertion.

CHLORAL RASH.

To the Editor of THE LANCET.

SIR,—I see in your number of June 18th you mention a case of chloral rash as being somewhat rare; I therefore beg to call your attention to a well-marked case that occurred in this asylum.

A female patient was admitted in 1877, and readmitted in 1879 and 1881. On both occasions she was in a state of acute delirious mania, and sleeping but little; twenty grains of chloral were given every night, and on the third and second days respectively a rash appeared. This began with bright red slightly elevated spots, which rapidly increased in size and coalesced, forming large erythematous patches, disappearing where pressed, and more marked on abdomen and legs, but also affecting face and trunk generally. The temperature rose to 100° and 101°, but the chloral being omitted, in three days it sank to normal, the eruption disappearing with slight desquamation in the same period. When admitted in 1881 no chloral was administered and no eruption has shown itself. The patient had not been living in a district in which any exanthemata were rife; she was not isolated, and no other was similarly affected.

I am, Sir, yours faithfully,

W. H. PACKER, L.R.C.P. Lond.

County Asylum, Shrewsbury, June 20th, 1881.

Surgeon, A.D.—From £100 to £150 per annum.

POISONOUS SCENTS.

To the Editor of THE LANCET.

SIR,—You will greatly oblige me if you will make known the following case through your journal, as I much wish to learn if any other practitioner has met with a similar one.

Miss M. L——, aged ten years, in perfect health at the time, visited a bazaar given in aid of the church she attends, and there bought some scent in a little leaden bottle labelled "Heliotrope." This she applied to her forehead and face several times to cool herself, and two days afterwards my attendance was requested, when I found the forehead very greatly swollen, hard, red, and shiny, covered also very thickly by a vesicular eruption.

The swelling rapidly extended over the face, quite closing the eyes for two days, and there were great feverishness and restlessness from intolerable itching; in fact, the case became one of erysipelas of the face. My patient is now nearly well, and I have placed the scent in the care of the president of the Pharmaceutical Society for examination, as I fear many such cheap articles are not made with the odoriferous principles of plants, but with those manufactured from coal tar, when it becomes easy to understand how irritating they may be if applied to a delicate skin.

I am, Sir, yours obediently,

Dorset-square, Regent's-park, N.W., July 20th, 1881. MATTHEW BLOXAM.

SUDDEN OBSTRUCTION OF THE ŒSOPHAGUS.

To the Editor of THE LANCET.

SIR,—As the above subject has been recently brought under the notice of the profession in your columns by Mr. Pugin Thornton and others, the following case will, I trust, be deemed of sufficient interest to merit publication:—

On April 26th, at 9.30 P.M., I was summoned to attend a gentleman, over sixty years of age, who had been suddenly seized with obstruction of the œsophagus which completely barred the passage of any food, solid or liquid, into the stomach. On my arrival, I was informed by my patient, who seemed in excellent health, that about 8 P.M., at the close of dinner, he inadvertently swallowed a piece of meat imperfectly masticated which did not enter the stomach, but lodged in the œsophagus near its cardiac extremity. This was recognised by the sense of oppression which immediately ensued in the lower dorsal region. A glass of sherry was at once swallowed, in the hope of facilitating the removal of the obstruction, but it was of no avail. Then some water was taken, which was not only ineffectual, but immediately developed hiccough, terminating in speedy rejection of all the liquid imbibed.

With regard to treatment, I first used the probang, pushing it down to its utmost extent, but without any benefit. I then employed a bougie of the largest size, which I believe effected an entrance into the stomach after encountering some resistance near its cardiac orifice. When the instrument was withdrawn, however, and liquid swallowed, there was no passage, as the fluid was brought up in a few moments. The conclusion arrived at, therefore, was that though the foreign body was removed, the œsophagus was completely closed by spasm; or, in other words, that the case was then one of spasmodic stricture of that tube. Perfect quietude was enjoined, while a small draught containing thirty minims of laudanum was prescribed.

April 27th.—At my visit at 7 A.M. I found that the opiate had been rejected, and that there was still total obstruction. After another unsuccessful trial of the probang and bougie, I administered a quarter of a grain of morphia hypodermically, applied a warm bran poultice to the lower dorsal region, and advised small pieces of ice to be swallowed frequently.

About noon the patient was seen in consultation with Mr. Tudor, senior surgeon to the Dorset County Hospital. On auscultation of the chest, both in front and behind, no evidence was discovered of disease of the heart or aorta. The bougie was again passed into the stomach, but without a successful result. It was then decided to discontinue further surgical interference, and to pursue only medical treatment. With this view liquid extract of belladonna was brushed freely over the spine in the dorsal region, while ten minims of the tincture of the same drug were administered in teaspoonful doses every four hours. This treatment was continued until about eight o'clock in the evening, when, on swallowing several small pieces of ice in rapid succession, it was found they were no longer rejected, and that some cream-ice freely entered the stomach. Shortly afterwards the patient was able to regale himself with half a pint of soup. From this time the dysphagia entirely ceased, leaving only a little mucous irritation of the canal, which, however, rapidly subsided.

It will thus be seen that the œsophagus was completely occluded for twenty-four hours, a period somewhat remarkable, considering that the cause was spasmodic stricture. The seat of obstruction was probably at the œsophageal opening in the diaphragm, as hiccough invariably supervened after about two ounces of liquid were swallowed, and continued until the latter was rejected.

Though this was the first attack and appeared to be originated by the unusual size of the alimentary bolus, it is but just to state that the patient is a gouty subject, and it is therefore probable that the development and continuance of the spasm were due to that dyscrasia.

This case, taken in conjunction with those previously reported by Mr. Thornton, seems to show that while in some instances sudden obstruction of the œsophagus is symptomatic of epithelioma or other organic disease of that tube, in others it is indicative only of irritative spasm, which may be successfully combated by appropriate remedial measures.

I am, Sir, your obedient servant,

J. MOORHEAD, M.D.,
Senior Surgeon, Royal Hospital, Weymouth.

RISING STARS IN AUSTRALIA.

NOT long since we directed attention to a tendency to pride on an inadequate basis in some quarters in Australia. One surgeon to a public hospital was held up to admiration by some indiscreet friend for a cure of fistula. Two or three more instances are to hand which show how necessary it is for brilliant young Australians to be cautious and modest.

A Metropolitan Teacher.—Mr. John Marshall, F.R.S., vice-president of the College of Surgeons, has succeeded Mr. Birkett as chairman of the Court of Examiners. Mr. Arthur Durham is chairman of the Board of Examiners. The examinations now going on will be the last for the present session.

A Graduate of the University of Durham.—The list was printed in our number of July 2nd last.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Berridge, Redhill; Mr. R. Cannon, Valparaiso; Mr. Karop; Dr. Kibbles; Mr. Blackett; Dr. Barford; Mr. Jackman; Mr. Blyth, Sheffield; Mr. M'Kinney; Mr. Seeley, Philadelphia; Mr. Hillhead, Glasgow; Mr. Howard Vincent, London; Mrs. Andrews, Wakefield; Messrs. Wainwright and Co., Birmingham; Mr. Cox; Surgeon-Major T. Oughton; Mr. Pfoundes; Messrs. Sampson Low and Co.; Mr. Todd, London; Mr. Ashmead, Brierley-hill; Mr. E. C. Beale; Mr. Howat; Mr. Campbell, Inverness; Mr. Hardie, Manchester; Dr. Dunlop, London; Mr. Leahy, London; Dr. Fothergill, London; Mr. Bloxam, London; Mr. Chapman, Hull; Mr. Clouting, Thetford; Surgeon-Major S. Smith; Mr. Bremridge; Dr. E. H. Jacob, Leeds; Mr. Finch-Salisbury; Mr. E. Morgan, London; Mr. Merryweather, Guisborough; Mr. R. Williams, London; Mr. Morgan, London; Mr. Gay, London; Mr. Campbell, Inverness; Mr. T. D. Acland; Mr. W. Smith, London; C. D., Buckhurst-hill; F.R.C.S., Old Kent-road; I. V. R. C.; Jack; No Humbug; Surgeon, R.D.; Diagnosis; S. A. S.; Fairplay; A Young Practitioner; Phœnix; Radix, Abergavenny; A. L. S. A., Newbury; Surgeon, London; A. C. G.; M.D., Clevedon; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Moss, Aberdeen; Mr. Hawksworth, Plumstead; Mr. Wright, Manchester; Mr. Palmer, Nayland; Mr. Churchill, Chesham; Messrs. Robson and Son, London; Mr. Chilcot, Mere; Mr. Hartt, Cromer; Dr. Harriss, Easingwold; Miss Jamison, Hayward's-heath; Dr. Vincent, Pickering; Miss Hockins, Weston-super-Mare; Dr. Stainthorpe; Mr. Morgan, Manningtree; Mr. Lethbridge, Eastwood; Mr. Wood, Bayswater Dr. MacAdam, Edinburgh; Mr. Crossfield, Isle of Man; Mr. Cowgill, Huddersfield; Mr. Pritchard, Rhymbach; Mr. McKave, Bishop Auckland; Dr. Philpots, Bournemouth; Mr. Dalton, Hackney; Mr. Cass, Bromyard; Mr. Cockeston, Hackney; Mr. Leaver, Stratford-on-Avon; Mr. Cotton, Preston; Messrs. Macmillan and Co., Cambridge; Mr. Powne, Crediton; E. F., Edinburgh; H. L.; J. D. R.; Beta, London; Blikore, Hampstead; A. B.; J. R. S., London; A. B., Gloucester; Secretary, Croydon; Medicus, Accrington; M.A.; Surgeon, Ealing; Medicus, London; Alpha, Leicester; Chirurgus B. O. J.; Medicus, Oldham; G.; W. C. H., Spalding; The Matron Teignmouth Hospital; Tortoise; Medicus, Minchinhampton; Beta, High Barnet; Nemo, Llanelly; Medicus, Bolton; Superintendent, Chelsea; Medicus, Hanley; R., Tavistock; G. C. N., Snainton; S. A. B.; Negotium; G. C. T., Mitcham; Surgeon, Highgate; C. J., Greenwich; W. A. R., Alderney; &c., &c.

El Vigia Médico-Farmacéutico Gazzetta degli Ospatali, Church of England Pulpit, Glasgow Evening Times, Weston-super-Mare Gazette, Western Mail, Pictorial World, Licensed Victuallers' Guardian, Uniao Medica (Rio de Janeiro), Dundee Advertiser, &c., have been received.

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